

EXHIBIT 1



Kercsmar & O'Hara
A Litigation Boutique



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Hirschfeld et al.

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(54) **SOCIAL NETWORKING WITH VIDEO ANNOTATION**

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PCT/US2014/014238—International Search Report and Written Opinion.

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G06F 15/16 (2006.01)
H04L 29/06 (2006.01)
G06Q 50/00 (2012.01)
H04L 12/58 (2006.01)

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(52) **U.S. Cl.**
CPC **H04L 65/602** (2013.01); **G06Q 50/01** (2013.01); **H04L 51/16** (2013.01); **H04L 51/32** (2013.01)

(57) **ABSTRACT**

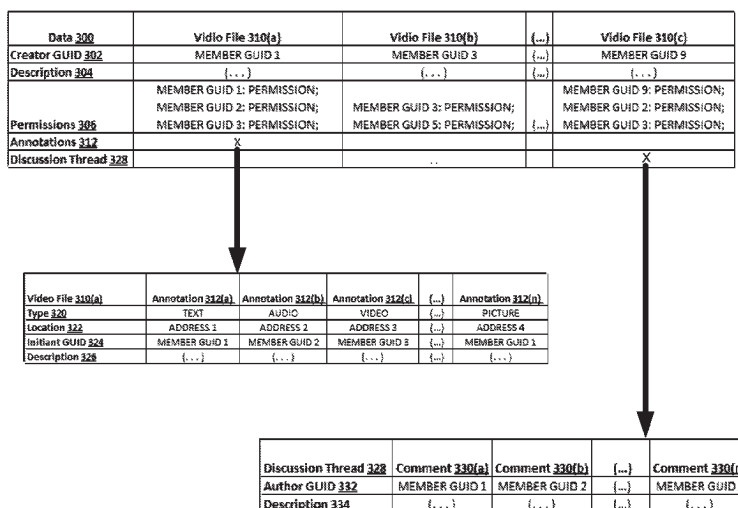
A method and system for annotating Playable Media Files in a social network having a plurality of members, wherein the method includes receiving the Playable Media File from a first member, receiving an annotation from another member, and embedding the annotation in the Playable Media File.

(58) **Field of Classification Search**

None

See application file for complete search history.

21 Claims, 4 Drawing Sheets



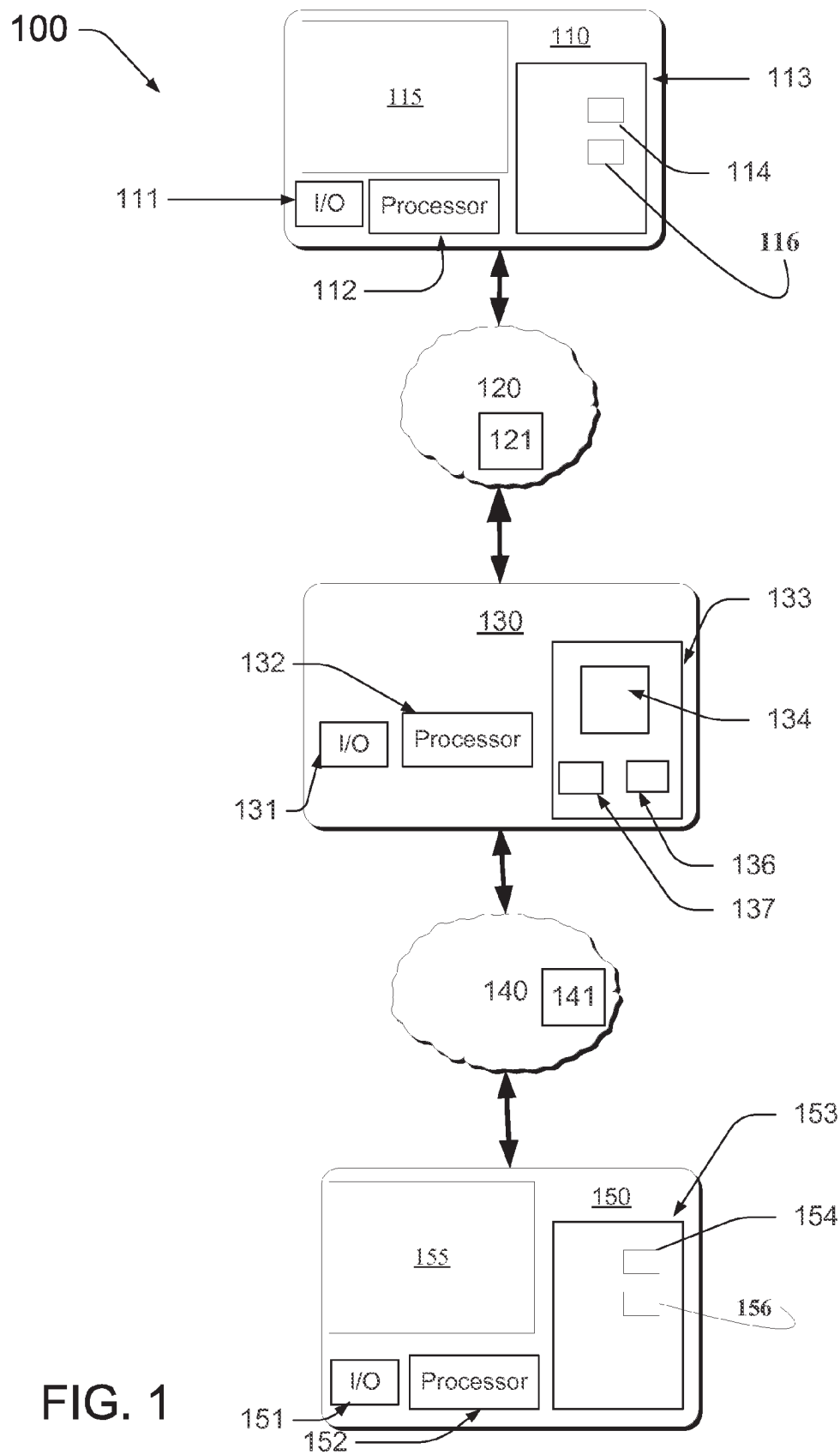
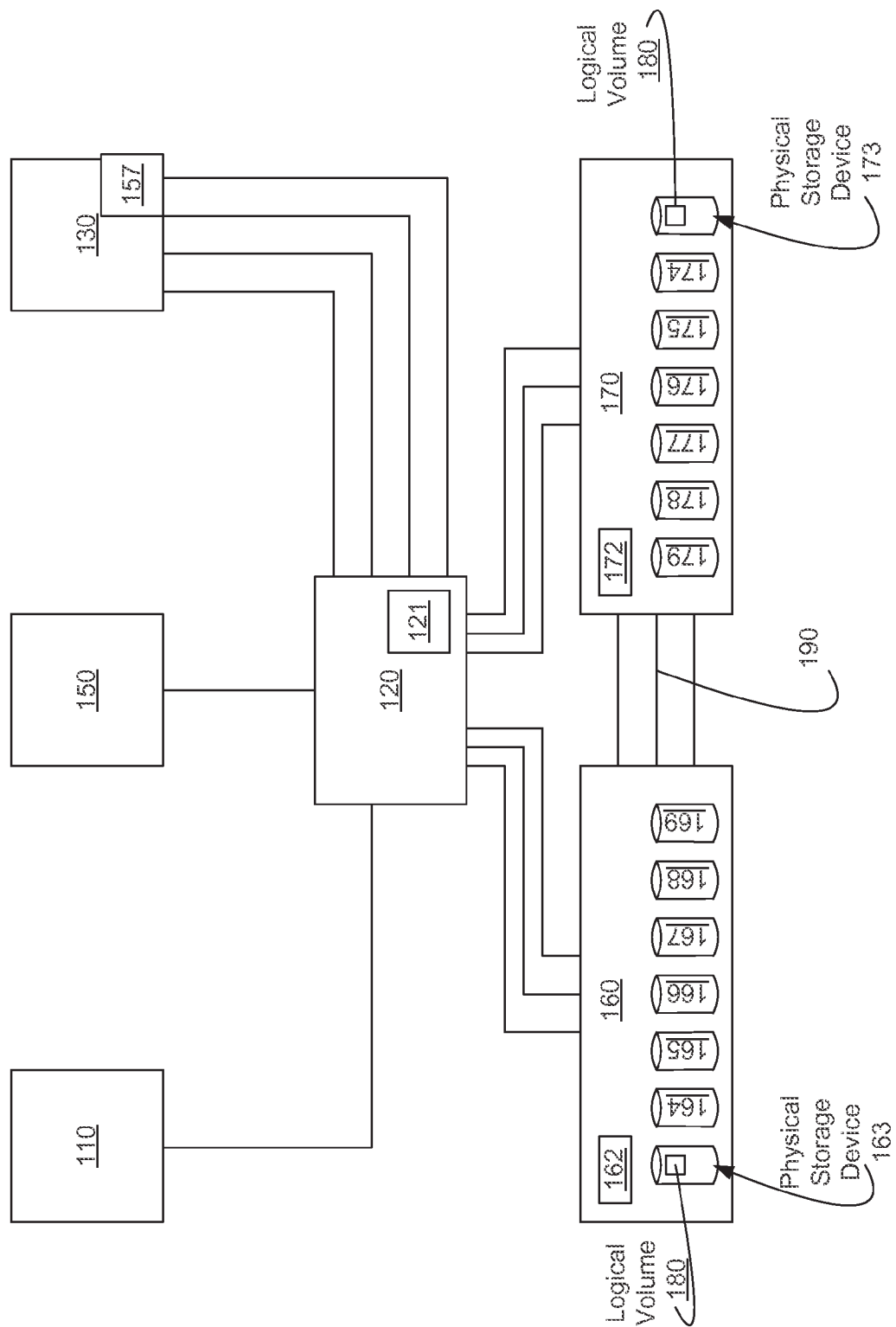


FIG. 2



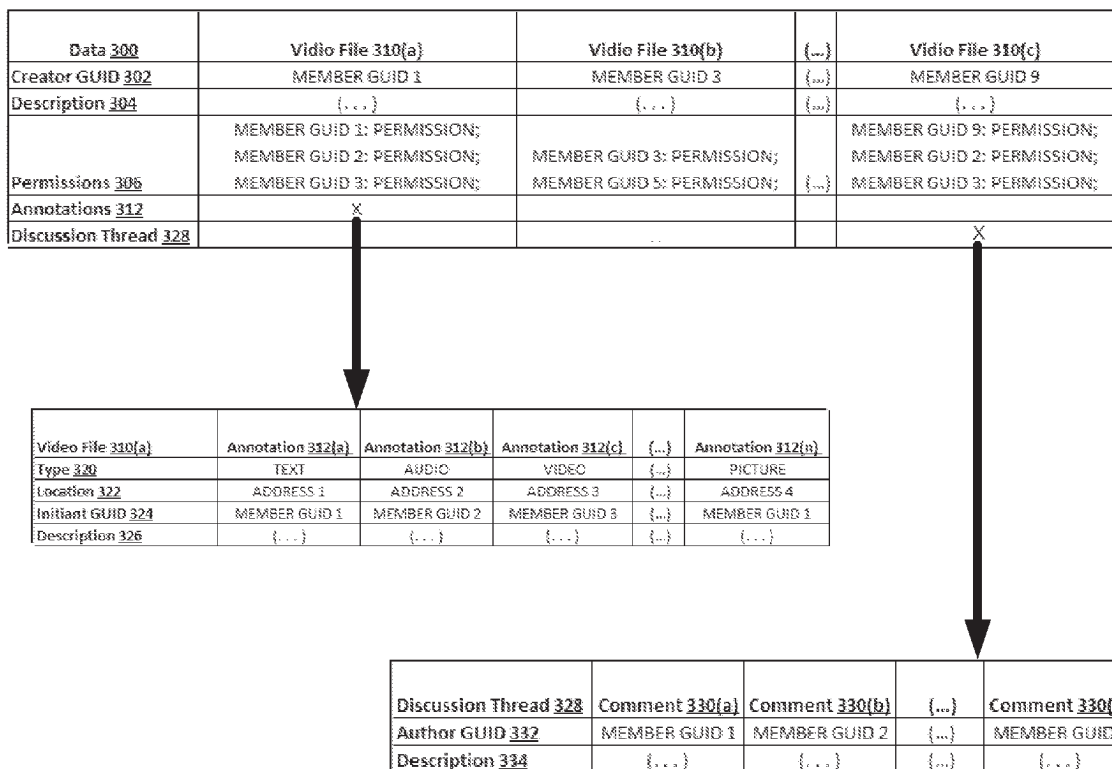


FIG. 3

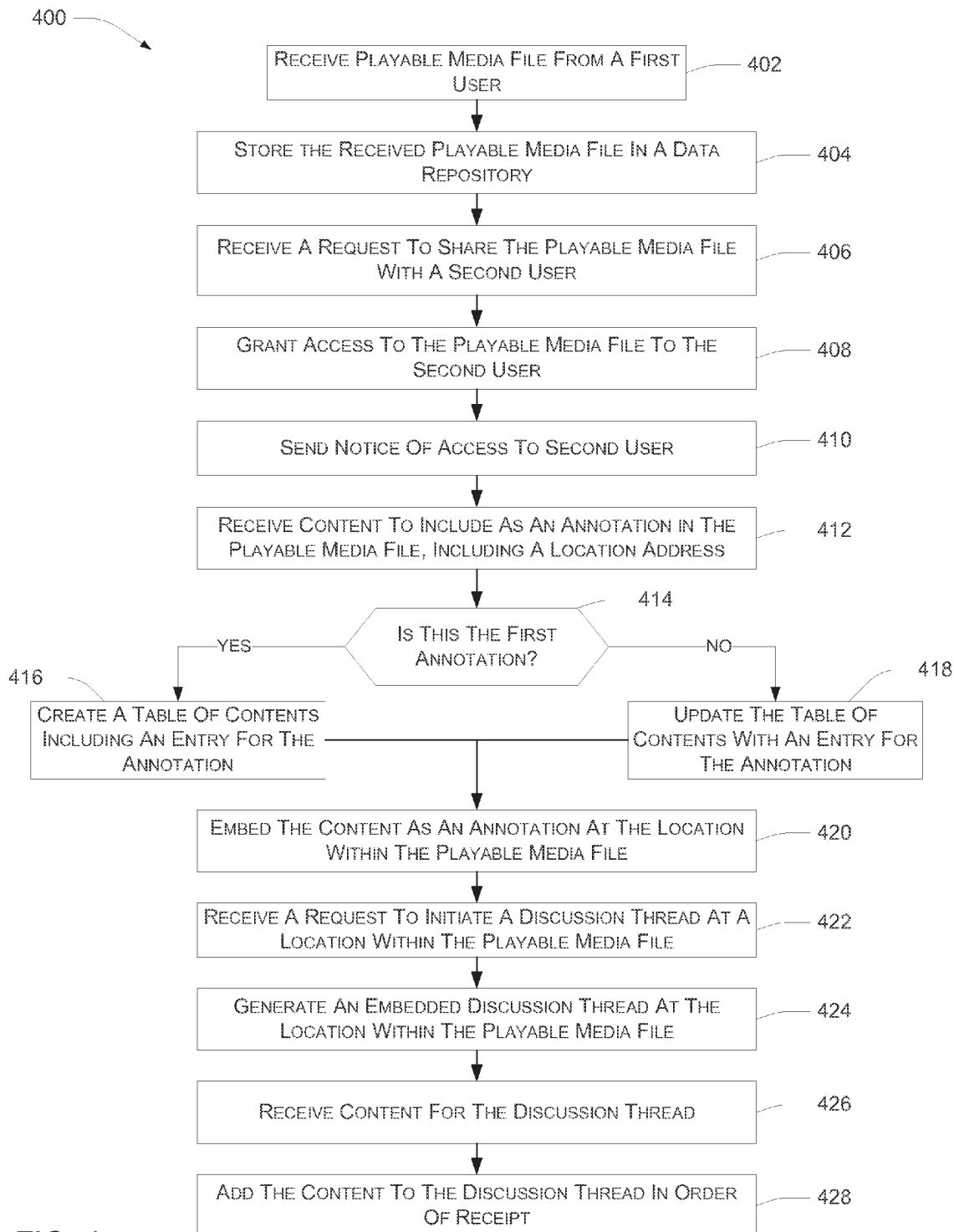


FIG. 4

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**SOCIAL NETWORKING WITH VIDEO
ANNOTATION****CROSS-REFERENCE TO RELATED
APPLICATIONS**

This application claims priority from a United States Provisional Patent Application filed on Jan. 31, 2013 and having a Ser. No. 61/759,219, the entire content of which is incorporated herein by reference.

FIELD OF THE INVENTION

Embodiments generally relate to assemblies, methods, devices, and systems for managing information, and more particularly, to assemblies, methods, devices, and systems for sharing and annotating video data between members of a social network.

SUMMARY OF THE INVENTION

In certain embodiments, a method for annotating Playable Media Files in a social network having a plurality of members is presented. By “Playable Media File,” Applicants mean, without limitation: an audio file, a video file, an audiovisual file, slide show, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, MPEG file. The method includes receiving the Playable Media File from a first member, receiving an annotation from another member, and embedding the annotation in the Playable Media File. In certain embodiments a specific location within the Playable Media File is specified along with the annotation and the annotation is embedded in the Playable Media File at that location. In certain embodiments the method further includes initiating a discussion thread within the Playable Media File at a specified location, where at least two members of the network can participate in the discussion.

In another embodiment, an article of manufacture is presented. The article of manufacture comprises a non-transitory computer readable medium having computer readable program code encoded therein to annotate Playable Media Files in a social network having a plurality of members. The computer readable program code has a series of computer readable program steps to effect receiving a Playable Media File from one member, receiving an annotation from another member, and embedding the annotation in the Playable Media File.

In yet other embodiments, a computer program product that is encoded in a non-transitory computer readable medium and usable with a programmable computer processor to annotate Playable Media Files in a social network having a plurality of members is presented. The computer program product includes computer readable program code that causes the programmable computer processor to receive a Playable Media File from one of the members, receive an annotation from another member, and embed the annotation in the Playable Media File.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood from a reading of the following detailed description taken in conjunction with the drawings in which like reference designators are used to designate like elements, and in which:

FIG. 1 illustrates an exemplary embodiment of a system for annotating video within a social network;

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FIG. 2 illustrates another exemplary embodiment of a system for annotating video within a social network;

FIG. 3 is a table of information fields stored in association with each Playable Media File; and

FIG. 4 is a flowchart of the method and/or process related to annotating Playable Media File within a social network.

**DETAILED DESCRIPTION OF PREFERRED
EMBODIMENTS**

The invention is described in preferred embodiments in the following description with reference to the FIGs., in which like numbers represent the same or similar elements. Reference throughout this specification to “one embodiment,” “an embodiment,” or similar language means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, appearances of the phrases “in one embodiment,” “in an embodiment,” “in certain embodiments,” and similar language throughout this specification may, but do not necessarily, all refer to the same embodiment. It is noted that, as used in this description, the singular forms “a,” “an” and “the” include plural referents unless the context clearly dictates otherwise.

The described features, structures, or characteristics of the invention(s) may be combined in any suitable manner in one or more embodiments. In the following description, numerous specific details are recited to provide a thorough understanding of embodiments of the invention(s). One skilled in the relevant art will recognize, however, that the invention(s) may be practiced without one or more of the specific details, or with other methods, components, materials, and an forth. In other instances, well-known structures, materials, or operations are not shown or described in detail to avoid obscuring aspects of the invention.

Applicants’ system and method includes a social network wherein a video can be created using any available video format, and that video can be shared between a plurality of social network members. Moreover in certain embodiments, Applicants’ system and method can be used by multiple members of a social network to add embedded annotations to a Playable Media File and to initiate discussion threads within the same.

Referring to FIG. 1, a portion of Applicants’ social network **100** is illustrated. In certain embodiments, Applicants’ social network **100** is an open social network. In certain embodiments, Applicants’ social network **100** is a closed social network.

In the illustrated embodiment of FIG. 1, social network **100** comprises a social network server **130** that is communicatively connected to a computing device **110** through a first communication fabric **120** and a computing device **150** through a second communication fabric **140**. In certain embodiments, the social network server **130** is owned and/or operated by a social networking service provider while computing devices **110** and **150** are owned and/or operated by users or members of the social network **100**, where a member is a user that has a profile containing information about the member stored in information **137** of the social network server **130**. In some embodiments, the computing device **110** is owned and operated by a first member and the computing device **150** is owned and operated by a second member.

For the sake of clarity, FIG. 1 shows a first computing device **110**, social network server **130**, and a second computing device **150**. FIG. 1 should not be taken as limiting. Rather, in other embodiments any number of entities and

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corresponding devices can be part of the social network **100**, and further, although FIG. 1 shows two communication fabrics **120** and **140**, in other embodiments less or more than two communication fabrics is provided in the social network **100**. For example, in certain embodiments, the communication fabric **120** and the communication fabric **140** are the same communication fabric.

In certain embodiments, the computing devices **110** and **150** and host **130** are each an article of manufacture. Examples of the article of manufacture include: a server, a mainframe computer, a mobile telephone, a smart telephone, a personal digital assistant, a personal computer, a laptop, a set-top box, an MP3 player, an email enabled device, a tablet computer, a web enabled device, or other special purpose computer each having one or more processors (e.g., a Central Processing Unit, a Graphical Processing Unit, or a microprocessor) that are configured to execute Applicants' API to receive information fields, transmit information fields, store information fields, or perform methods.

By way of illustration and not limitation, FIG. 1 illustrates the computing device **110**, the social network server **130**, and the computing device **150** as each including a processor **112**, **132**, and **152**, respectively, a non-transitory computer readable medium **113**, **133**, and **153**, respectively, having a series of instructions, an input/output means **111**, **131**, and **151**, respectively, such as a keyboard, a mouse, a stylus, touch screen, a camera, a scanner, or a printer. Computer readable program code **114**, **134**, and **154** is encoded in non-transitory computer readable media **113**, **133**, and **153**, respectively. Processors **112**, **132**, and **152** utilize computer readable program code **114**, **134**, and **154**, respectively, to operate computing devices **110**, **130**, and **150**, respectively. In certain embodiments, the computing device **110**, **130**, and **150** employ hardware and/or software that supports accelerometers, gyroscopes, magnetometers (e.g., solid state compasses) and the like.

Processors **112** and **152** access Application Program Interfaces (APIs) **116** and **156**, respectively, encoded in computer readable media **113** and **153**, respectively, to communicate with host **130** and access Applicants' algorithm **136** encoded in computer readable medium **133** to implement Applicants' social network and method described herein. Algorithm **136** comprises Applicants' source code to operate a public or private social network, and when implemented by computing device **110** causes a graphic user interface ("GUI") to be displayed on display screen **115**, wherein that GUI comprises and displays a plurality of graphical interactable objects. A member using computing device **110** (or computing device **150**) can utilize that GUI to access a logical volume, such as for example and without limitation logical volume **180** (FIG. 2), wherein information specific to that user are encoded in logical volume **180**. The member and/or user can further utilize the GUI to access Applicants' social network as described herein.

Processor **132** accesses the computer readable program code **134**, encoded on the non-transitory computer readable medium **133**, and executes an instruction **136** to electronically communicate with the computing device **110** via the communication fabric **120** or electronically communicate with the computing device **150** via the communication fabric **140**. Encoded information **137** is maintained of the data communicated or information fields communicated, e.g., date and time of transmission, frequency of transmission and the like, with any or all of the computing device **110** and the computing device **150**. In certain embodiments, information **137** is analyzed and/or mined. In certain embodiments,

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information **137** is encoded in a plurality of individual logical volumes specific to each member/user.

In certain embodiments, computing devices **110** and **150** further comprise one or more display screens **115** and **155**, respectively. In certain embodiments, display screens **115** and **155** comprise an LED display device.

In certain embodiments, the information fields received from the computing device **110** at the social network server **130** are exchanged with other computing devices not shown in FIG. 1. For example, information fields received from a social network in which the member has an Internet presence is sent to the social network server **130** and stored at the information **137** in association with a profile of the member. Alternatively, or in combination, the information fields transmitted from the computing device **110** to the social network server **130** is sent to an account of the member within the social network.

In certain embodiments, information **137** is encoded in one or more hard disk drives, tape cartridge libraries, optical disks, combinations thereof, and/or any suitable data storage medium, storing one or more databases, or the components thereof, in a single location or in multiple locations, or as an array such as a Direct Access Storage Device (DASD), redundant array of independent disks (RA/D), virtualization device, etc. In certain embodiments, information **137** is structured by a database model, such as a relational model, a hierarchical model, a network model, an entity-relationship model, an object-oriented model, or a combination thereof. For example, in certain embodiments, the information **137** is structured in a relational model that stores a plurality of Identities for each of a plurality of members as attributes in a matrix.

In certain embodiments, the computing devices **110**, **130**, and **150** include wired and/or wireless communication devices which employ various communication protocols including near field (e.g., "Blue Tooth") and/or far field communication capabilities (e.g., satellite communication or communication to cell sites of a cellular network) that support any number of services such as: telephony, Short Message Service (SMS) for text messaging, Multimedia Messaging Service (MMS) for transfer of photographs and videos, electronic mail (email) access, or Global Positioning System (GPS) service, for example.

As illustrated in FIG. 1, the communication fabrics **120** and **140** each comprise one or more switches **121** and **141**, respectively. In certain embodiments, communication fabrics **120** and **140** are the same. In certain embodiments, at least one of the communication fabrics **120** and **140** comprises the Internet, an intranet, an extranet, a storage area network (SAN), a wide area network (WAN), a local area network (LAN), a virtual private network, a satellite communications network, an interactive television network, or any combination of the foregoing. In certain embodiments, at least one of the communication fabrics **120** and **140** contains either or both wired or wireless connections for the transmission of signals including electrical connections, magnetic connections, or a combination thereof. Examples of these types of connections include: radio frequency connections, optical connections, telephone links, a Digital Subscriber Line, or a cable link. Moreover, communication fabrics **120** and **140** utilize any of a variety of communication protocols, such as Transmission Control Protocol/Internet Protocol (TCP/IP), for example.

Referring to FIG. 2, the computing devices **110**, **130** and **150** are each communicatively connected to the communication fabric **120**, such as a WAN or Internet. The social network server **130** is a computing device that is owned

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and/or operated by a social networking service provider and computing devices **110** and **150** are computing devices that are owned and/or operated by a user or member of the system. In certain embodiments, the social network server **130** provides access to the computing devices **110** and **150** to execute Applicants' source code **136** via a Software as a Service (SaaS) means.

In certain embodiments information fields are received from one or more computing devices **110**, **130** and/or **150** and stored on the "Cloud" such as data storage library **160** and/or **170**. Referring to FIG. 2, each of the data storage libraries **160** and **170** have corresponding physical storage devices, such as and without limitation physical data storage devices **163-169** for data storage library **160** and **173-179** for data storage library **170**.

In certain embodiments, data storage library **160** and data storage library **170** are configured in a Peer To Peer Remote Copy ("PPRC") storage system, wherein the information fields in data storage library **160** is automatically backed up in data storage library **170**. In certain embodiments, Applicants' PPRC storage system utilizes synchronous copying. In certain embodiments, Applicants' PPRC storage system utilizes asynchronous copying.

In the illustrated embodiment of FIG. 2, physical storage device **163** is configured to comprise logical volume **180**. In certain embodiments, each physical storage device in data storage library **160** is configured to comprise a plurality of logical volumes. Similarly, each physical storage device in data storage library **170** is configured to comprise a corresponding plurality of logical volumes. In certain embodiments, each member of the social network is assigned a unique logical volume. In such embodiments a permission file **157** may be encoded in computer readable medium **133** or in data storage libraries **160** and **170** that associates each logical volume with a social network member and further associates each logical volume with access permissions for certain designated other social network users. Each social network user configures his/her own logical volume permissions. In certain embodiments, if a first user desires to remove access permissions from a second user, that first member simply accesses his/her permissions file and deletes the second user. Thereafter, the second user cannot retrieve data stored on the logical volume associated with the first user.

Referring to FIGS. 1, 2, and 3, Applicants' algorithm **136**, and its functions, can be accessed by users of Applicants' social network **100** to create, share, edit, and/or annotate a Playable Media File. One member, using a computing device such as computing device **110** or **150**, to access social network server **130**, uploads a Playable Media File to social network **100**, storing the same on data storage library **160** or **170**. In certain embodiments the Playable Media File is stored on the unique logical volume assigned to the member. Once uploaded, the member can grant access to the Playable Media File to one or more other members by storing the access permissions in permission file **157**. In certain embodiments the access includes levels such as, and without limitation, view only, view/edit, view/edit/share, and the like. In certain embodiments the access includes conditions or restrictions such as expirations dates, limitations on the number of times the file can be viewed, and the like.

Referring specifically to FIG. 3, upon uploading the Playable Media File to social network **100**, a data profile **300** is created for the Playable Media File and is stored on data storage library **160** or **170**. Data profile **300** includes various information fields, including the Global Unique Identifier (GUID) **302** associated with the creating member, a descrip-

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tion **304** of the Playable Media File (e.g., a title), and permissions **306** held by various members to access, edit, and/or share the Playable Media File. Data profile **300** may further include subsequently added annotations **312** and discussion threads **328**.

Applicants' algorithm **136** provides the ability for each user having access to the Playable Media File stored on data storage library **160** or **170** (or those having the correct permissions) to edit the Playable Media File by adding annotations at various locations within the file. Such annotations may be any known format and may include text, video, audio, pictures, or a combination thereof, and may be embedded directly into the Playable Media File or may be stored as a separate file. When subsequent viewers execute the Playable Media File the annotation will be visible at the specific time segment. In certain such embodiments, the annotation is shown in the same window as the Playable Media File and may be visible over the Playable Media File. In other embodiments, the annotation is shown in a separate window. In yet other embodiments Applicants' algorithm **136** generates a time line which displays the Playable Media File's time scale and tracks the annotations.

In certain embodiments, the member creating the annotation can set permissions for the annotation, restricting who can view or edit the annotation. In such embodiments, the permissions are stored in permission file **157**.

For those Playable Media Files having annotations, data profile **300** further contains information fields concerning each annotation **312(a)-(n)**, including one or more of the type **320** of the annotation (text, audio, video, picture, etc.), the location **322** of the associated annotation within the Playable Media File, the GUID **324** of the member who initiated the annotation, and a description **326** for the annotation, such as a title or other descriptor.

In certain embodiments Applicants' algorithm **136** further generates a table of contents of the annotations added to the Playable Media File using the information in data profile **300**, including a link to each annotation. The link may be in the form of a pointer, electronic bookmark, hyperlink, or any other type of link. Where the link is a hyperlink, the hyperlink may link to an annotation that is embedded within the Playable Media File or one that is saved as a different file on data storage library **160** or **170**. Where the annotation is remote from the Playable Media File, the annotation may be viewed and edited separately from the Playable Media File. For each new annotation added to the Playable Media File, Applicants' algorithm **136** updates the table of contents. In such embodiments, the table of contents may include one or more of a caption or other description of the annotation, the time of the annotation within the Playable Media File, the author of the annotation, and the date and/or time the annotation was made.

In certain embodiments Applicants' algorithm **136** can further be used to initiate an embedded discussion thread at a specific location within the Playable Media File. In such embodiments, upon receiving a request from a member, Applicants' algorithm **136** generates the discussion thread at a location within the Playable Media File specified by the member. In certain embodiments the request further includes a type identifier indicating whether the discussion thread is to be open or closed. Where the open identifier is provided, the discussion thread is open to all members and therefore any member may view and add a comment to the discussion thread. Where the closed identifier is provided, the discussion thread is private and only available to particular members. In such embodiments the request provided by the initiating member includes identifiers for one or more mem-

bers that are to have access to the discussion thread. In certain such embodiments Applicants' algorithm **136** further sends invitations to the identified members to invite them to participate in the thread. In certain such embodiments, the permissions given to various members to access and participate in the discussion thread is stored in permissions file **157**.

Members having access to the Playable Media File can then add written, audible, pictorial, or video comments to the thread, which are posted in the sequence in which they are espoused by the members. In certain embodiments only members having edit privileges can post in the embedded discussion thread. In certain embodiments only individuals having specific discussion thread privileges can post in the embedded discussion thread. In certain embodiments, the privilege to post in an embedded thread is specific to the particular thread, and therefore a member may have access to post in one thread but not another. In certain embodiments, the discussion thread is visible to any individual viewing the Playable Media File. In other embodiments, the discussion thread is visible only to certain individuals, such as those that have been given specific access to the thread or those that have edit privileges for the video.

For Playable Media Files having discussion threads, data profile **300** further includes information fields for each discussion thread **328**, including for each comment **330(a)-(n)** made in the discussion thread by a member, the GUID of the member author of the comment, and a description **334**, which may be the comment itself or another identifier.

While the information field of data profile **300** illustrated in FIG. **3** show the primary information that is recorded, FIG. **3** is meant to be illustrative and not limiting. In certain embodiments other data fields are included, such as and without limitation, the data and time the Playable Media File was updated, the history of the Playable Media File, including the identity of any member who viewed or edited the Playable Media Files and the date and time the file was viewed or edited, the size of the data file, and similar information for each annotation and discussion thread. In other embodiments data profile **300** may have fewer than the information fields illustrated in FIG. **3**.

Referring to FIG. **4**, a flowchart summarizes an exemplary method **400** for managing and annotating Playable Media Files shared between members of a social network via the system of FIG. **1** and/or FIG. **2**. As is depicted in block **402**, a Playable Media File is received from a first user by social network **100**. For example, a first member using computing device **110** uploads a Playable Media File to social network **100** through communication fabric **120**. In certain embodiments additional information is submitted with the Playable Media File such as a description of the file. The Playable Media File and associated information is then stored in a data repository, as indicated by block **404**. For example, the social network server **130** stores the received Playable Media File in logical volume **180** of data storage library **160**, which is associated with the member submitting the file. The associated information may further be used to populate data profile **300** (FIG. **3**), which includes data for a plurality of Playable Media Files.

In certain embodiments, a request to share the Playable Media File with one or more members of the social network **100** may be received separately from the Playable Media File, as is indicated in block **406**. In other embodiments, the request is submitted with the Playable Media File in step **402**. In certain embodiments the request to share the Playable Media File includes permission levels for each member identified in the requests, such as, and without limitation,

view only, view/edit, view/edit/share. In response, access is granted to the members identified, as is indicated by block **408**. For example, upon receipt of the information, network server **300** may store the access information and permission level in field **306** (FIG. **3**) of data profile **300** and/or in permissions file **157** (FIG. **2**). In certain embodiments an invitation or other notice is then sent to the members who were given access, as indicated by block **410**. For example, network server **130** transmits a communication through communication fabric **140** to computing device **150** of the second member, notifying the second member that he or she now has access to the Playable Media File. In certain embodiments the notice may further include a link to the Playable Media File or information about where and how to access the Playable Media File.

As indicated by block **412**, network **100** may receive content to include as an annotation in the Playable Media File and a specified location within the file. For example the second member, after viewing the Playable Media File stored on logical volume **180** associated with the first member, may edit the file by providing a picture and text to server **130** to be included as an annotation from the minute 1.5 to minute 2 of the Playable Media File. As indicated by blocks **414**, **416**, and **418**, if the annotation is the first annotation for the Playable Media File, a table of contents is created for the file which includes an entry for the annotation submitted. Alternatively, if the annotation is not the first and the Playable Media File already has a table of contents, the table of contents is updated to include an entry for the annotation. For example, upon receipt of an annotation from computing device **150** of the second user, network server **130** determines if the Playable Media File already has annotations (and thus a table of contents) by checking annotations field **312** (FIG. **3**) of data profile **300**. If no annotations are included in the Playable Media File, the network server **130** creates a table of contents using the data in data profile **300** and the annotation and any related information received from computing device **150**. In certain embodiments the table of contents is then embedded in the Playable Media File. In other embodiments, the table of contents is stored separately on logical volume **180** with the Playable Media File. In certain such embodiments, the table of contents is associated with the Playable Media File such that it is always presented to a user viewing the Playable Media File. In other embodiments, the table of contents may be viewed separately from the Playable Media File.

As indicated by block **420**, the annotation is then embedded in the Playable Media File at the location indicated in the request. For example, network server **130** edits the Playable Media File stored in logical volume **180** to display (or play in the case of audio or video annotations) the material provided by the second user at minute 1.5 to minute 2 of the video. In certain embodiments network server **130** further updates the information fields of data profile **300** associated with the annotation just embedded, such as fields **320**, **322**, **324**, and **326** for annotation **312(a)** (FIG. **3**).

As indicated by block **422**, network **100** may further receive a request to initiate a discussion thread at a location within a Playable Media File. For example, the first member, using computing device **110**, may send a request to network server **130** via communication fabric **120** to include a discussion thread in the Playable Media File at minute 5 of the video. In certain embodiments the request further includes additional information such as whether the requested discussion thread is to be open or closed or identifiers for other members of network **100** who will have access to view and/or participate in the discussion.

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Upon receiving such a request, an embedded discussion thread is generated at the specified location within the Playable Media File, as indicated by block 424. For example, network server 130 generates an embedded discussion thread at minute 5 having the access permissions specified by the first user. In certain embodiments, the generation further includes updating or populating the associated fields, such as fields 332 and 334 (FIG. 3), of data profile 100. In certain embodiments, generating the embedded discussion threads further includes storing the permission information in permissions file 157.

As indicated by blocks 426 and 428, in certain embodiments content for the discussion thread is then received by network 100 and added to the embedded discussion thread. In certain embodiments, the initial content for the discussion thread is sent with the request to initiate the same. For example, the first member, having sent the request to initiate a discussion thread, may send a first text comment to network server 130. Upon receipt of the comment, network server 130 edits the discussion thread with the comment provided. The second member, using computing device 150, may then send to network server 130 a second comment in response to the first comment. The second comment may be in a different format than the first, by way of example an audio comment or a picture. Network server 130 then further edits the discussion thread to include the second comment after the first comment.

The schematic flow chart diagrams included are generally set forth as a logical flow-chart diagram (e.g., FIG. 4). As such, the depicted order and labeled steps are indicative of one embodiment of the presented method. In certain embodiments, other steps and methods are conceived that are equivalent in function, logic, or effect to one or more steps, or portions thereof, of the illustrated method. Additionally, the format and symbols employed are provided to explain the logical steps of the method and are understood not to limit the scope of the method. Although various arrow types and line types are employed in the flow-chart diagrams, they are understood not to limit the scope of the corresponding method (e.g., FIG. 4). Indeed, some arrows or other connectors may be used to indicate only the logical flow of the method. For instance, an arrow indicates a waiting or monitoring period of unspecified duration between enumerated steps of the depicted method. Additionally, the order in which a particular method occurs may or may not strictly adhere to the order of the corresponding steps shown.

In certain embodiments, individual steps recited in FIG. 4 are combined, eliminated, or reordered.

In certain embodiments, Applicants' invention includes an article of manufacture comprising a platform for information management, such as computing device 110, 130, and/or 150, comprising computer readable program code, such as API 116, API 156, and/or Applicants' social network source code 136, residing in a non-transitory computer readable medium, such as computer readable medium 113, 133, and/or 153, where that computer readable program code can be executed by a processor, such as processor 112 (FIG. 1) and/or 132 (FIG. 1), and/or 152, to implement Applicants' social network source code.

In summary, a user accesses a MEDIA (regardless if the media file is on the user's device or is accessed through a remote streaming connection). Once the MEDIA is accessed the user can associate multiple indexes, each referencing a specific point in time in the MEDIA. Each MEDIA index comprises a "MEDIA Point".

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Each MEDIA Point references a specific point in time the MEDIA. A user may create and associate an annotation to each MEDIA Point. Each Annotation may include other attached MEDIA, Image(s) and/or a URL(s).

Each MEDIA Point may be stored in a user created folder structure for the purpose of organizing multiple MEDIA Points for later reference. Each MEDIA Point may be shared with one or more users via a social network of users.

Each shared MEDIA Point gives recipients direct access to the point in the MEDIA referenced by the MEDIA Point. Each shared MEDIA Point includes any associated annotation(s) including any attached MEDIA, Image(s) or URL(s). Each shared MEDIA Point allows the network of users with whom the MEDIA Point was shared to engage in one or more discussions, each discussion associated a MEDIA Point.

In certain embodiments, Applicants' social network source code resides in a computer program product, where that computer program product comprises computer readable program code that can be executed by a computing device. In either case, in certain embodiments, the computer readable program code is encoded in a non-transitory computer readable medium comprising, for example, a magnetic information storage medium, an optical information storage medium, an electronic information storage medium, and the like. "Electronic storage media," means, for example and without limitation, one or more devices, such as and without limitation, a PROM, EPROM, EEPROM, Flash PROM, compactflash, smartmedia, and the like.

Examples of computer readable program code include, but are not limited to, micro-code or micro-instructions, machine instructions, such as produced by a compiler, code used to produce a web service, and files containing higher-level instructions that are executed by a computer using an interpreter. For example, embodiments are implemented using Java, C++, or other programming languages (e.g., object-oriented programming languages) and development tools. Additional examples of computer code include, but are not limited to, control signals, encrypted code, and compressed code.

While the preferred embodiments of the present invention have been illustrated in detail, it should be apparent that modifications and adaptations to those embodiments may occur to one skilled in the art without departing from the scope of the present invention as set forth herein.

We claim:

1. A method to annotate Playable Media Files in a social network having a plurality of members, comprising:
 - receiving by a member of said social network a Playable Media File;
 - creating by said member of said social network an annotation relating to said Playable Media File;
 - providing said annotation by said member of said social network to a network server;
 - providing a data profile by said member of said social network to said network server, wherein said data profile comprises a location in said Playable Media File where said annotation should be embedded;
 - embedding by said network server said annotation in the Playable Media File at said location;
 - determining by said network server if said annotation is a first annotation submitted for said Playable media File;
 - if said annotation is not a first annotation submitted for said Playable Media File, encoding said data profile in a previously-created table of contents for said Playable Media File;

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if said annotation is a first annotation submitted for said Playable Media File;
 creating a table of contents by said network server for said Playable Media File;
 encoding by said network server said data profile in said table of contents;
 wherein said Playable Media File is selected from the group consisting of an audio file, a video file, an audiovisual file, slide show, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, MPEG file.

2. The method of claim 1, further comprising: receiving first content;
 forming said annotation using said first content.

3. The method of claim 2, further comprising: determining if said annotation comprises a first annotation embedded in said Playable Media File; when said annotation comprises a first annotation embedded in said Playable Media File, creating a table of contents including an entry for said annotation.

4. The method of claim 3, further comprising when said annotation does not comprises a first annotation embedded in said Playable Media File, updating a table of content an entry for said annotation.

5. The method of claim 3, further comprising: receiving a request to initiate a discussion thread at a location within said Playable Media File; and generate an embedded discussion at said location within said Playable Media File.

6. The method of claim 5, further comprising: receiving second content; and adding said second content to said discussion.

7. The method of claim 6, further comprising: receiving a plurality of additional content in a sequential order; and add said plurality of additional content in said sequential order.

8. An article of manufacture comprising a non-transitory computer readable medium having computer readable program code encoded therein to annotate Playable Media Files in a social network having a plurality of members, the computer readable program code comprising a series of computer readable program steps to effect:

receiving by a member of said social network a Playable Media File;
 creating by said member of said social network an annotation relating to said Playable Media File;
 providing said annotation by said member of said social network to a network server;
 providing a data profile by said member of said social network to said network server, wherein said data profile comprises a location in said Playable Media File where said annotation should be embedded;
 embedding by said network server said annotation in the Playable Media File at said location;
 determining by said network server if said annotation is a first annotation submitted for said Playable media File;
 if said annotation is not a first annotation submitted for said Playable Media File, encoding said data profile in a previously-created table of contents for said Playable Media File;
 if said annotation is a first annotation submitted for said Playable Media File;
 creating a table of contents by said network server for said Playable Media File;
 encoding by said network server said data profile in said table of contents.

9. The article of manufacture of claim 8, said computer readable program code further comprising a series of computer readable program steps to effect: receiving first content; forming said annotation using said first content.

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10. The article of manufacture of claim 9, said computer readable program code further comprising a series of computer readable program steps to effect: determining if said annotation comprises a first annotation embedded in said Playable Media File; when said annotation comprises a first annotation embedded in said Playable Media File, creating a table of contents including an entry for said annotation.

11. The article of manufacture of claim 10, said computer readable program code further comprising a series of computer readable program steps to effect when said annotation does not comprises a first annotation embedded in said Playable Media File, updating a table of content an entry for said annotation.

12. The article of manufacture of claim 10, said computer readable program code further comprising a series of computer readable program steps to effect: receiving a request to initiate a discussion thread at a location within said Playable Media File; and generate an embedded discussion at said location within said Playable Media File.

13. The article of manufacture of claim 12, said computer readable program code further comprising a series of computer readable program steps to effect: receiving second content; and adding said second content to said discussion.

14. The article of manufacture of claim 13, said computer readable program code further comprising a series of computer readable program steps to effect: receiving a plurality of additional content in a sequential order; and add said plurality of additional content in said sequential order.

15. A computer program product encoded in a non-transitory computer readable medium and usable with a programmable computer processor to annotate Playable Media Files in a social network having a plurality of members, comprising:

computer readable program code which causes said programmable computer processor to receive by a member of said social network a Playable Media File;

computer readable program code which causes said programmable computer processor to create by said member of said social network an annotation relating to said Playable Media File;

computer readable program code which causes said programmable computer processor to provide said annotation by said member of said social network to a network server;

computer readable program code which causes said programmable computer processor to provide a data profile by said member of said social network to said network server, wherein said data profile comprises a location in said Playable Media File where said annotation should be embedded;

computer readable program code which causes said programmable computer processor to embed by said network server said annotation in the Playable Media File at said location;

computer readable program code which causes said programmable computer processor to determine by said network server if said annotation is a first annotation submitted for said Playable media File;

computer readable program code which causes said programmable computer processor to if said annotation is not a first annotation submitted for said Playable Media File, encoding said data profile in a previously-created table of contents for said Playable Media File;

computer readable program code which causes said programmable computer processor to if said annotation is a first annotation submitted for said Playable Media File;

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computer readable program code which causes said programmable computer processor to create a table of contents by said network server for said Playable Media File;

computer readable program code which causes said programmable computer processor to encode by said network server said data profile in said table of contents.

16. The computer program product of claim 15, further comprising: computer readable program code which causes said programmable computer processor to receive first content; computer readable program code which causes said programmable computer processor to form said annotation using said first content.

17. The computer program product of claim 16, further comprising: computer readable program code which causes said programmable computer processor to determine if said annotation comprises a first annotation embedded in said Playable Media File; computer readable program code which, when said annotation comprises a first annotation embedded in said Playable Media File, causes said programmable computer processor to create a table of contents including an entry for said annotation.

18. The computer program product of claim 16, further comprising computer readable program code which, when said annotation does not comprises a first annotation embed-

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ded in said Playable Media File, causes said programmable computer processor to update a table of content an entry for said annotation.

19. The computer program product of claim 17, further comprising: computer readable program code which causes said programmable computer processor to receive a request to initiate a discussion thread at a location within said Playable Media File; and computer readable program code which causes said programmable computer processor to generate an embedded discussion at said location within said Playable Media File.

20. The computer program product of claim 19, further comprising: computer readable program code which causes said programmable computer processor to receive second content; and computer readable program code which causes said programmable computer processor to add said second content to said discussion.

21. The computer program product of claim 20, further comprising: computer readable program code which causes said programmable computer processor to receive a plurality of additional content in a sequential order; and computer readable program code which causes said programmable computer processor to add said plurality of additional content in said sequential order.

* * * * *

EXHIBIT 2



Kercsmar & O'Hara
A Litigation Boutique



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(12) **United States Patent**
Hirschfeld et al.

(10) **Patent No.:** **US 10,084,840 B2**

(45) **Date of Patent:** ***Sep. 25, 2018**

(54) **SOCIAL NETWORKING WITH VIDEO ANNOTATION**

H04L 29/08 (2006.01)

G06Q 50/00 (2012.01)

(71) Applicant: **ART RESEARCH AND TECHNOLOGY, L.L.C.**, Phoenix, AZ (US)

(52) **U.S. Cl.**
CPC **H04L 65/602** (2013.01); **G06Q 50/01** (2013.01); **H04L 51/16** (2013.01); **H04L 51/32** (2013.01); **H04L 67/10** (2013.01); **H04L 67/02** (2013.01); **H04L 67/306** (2013.01); **H04L 67/42** (2013.01)

(72) Inventors: **David Hirschfeld**, Scottsdale, AZ (US);
Barry Fernando, Phoenix, AZ (US);
Mark C. Phelps, Phoenix, AZ (US);
Theodore V. Haig, Phoenix, AZ (US)

(58) **Field of Classification Search**
None
See application file for complete search history.

(73) Assignee: **ART RESEARCH AND TECHNOLOGY, L.L.C.**, Phoenix, AZ (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

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(21) Appl. No.: **15/269,879**

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(22) Filed: **Sep. 19, 2016**

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(65) **Prior Publication Data**

US 2017/0013042 A1 Jan. 12, 2017

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Related U.S. Application Data

(63) Continuation-in-part of application No. 14/170,149, filed on Jan. 31, 2014, now Pat. No. 9,451,001.

(60) Provisional application No. 61/759,219, filed on Jan. 31, 2013.

(51) **Int. Cl.**
G06F 15/16 (2006.01)
H04L 29/06 (2006.01)
H04L 12/58 (2006.01)

(57) **ABSTRACT**

A method and system for annotating Playable Media Files in a social network having a plurality of members, wherein the method includes receiving the Playable Media File from a first member, receiving an annotation from another member, and saving the annotation in a file other than the Playable Media File.

33 Claims, 14 Drawing Sheets

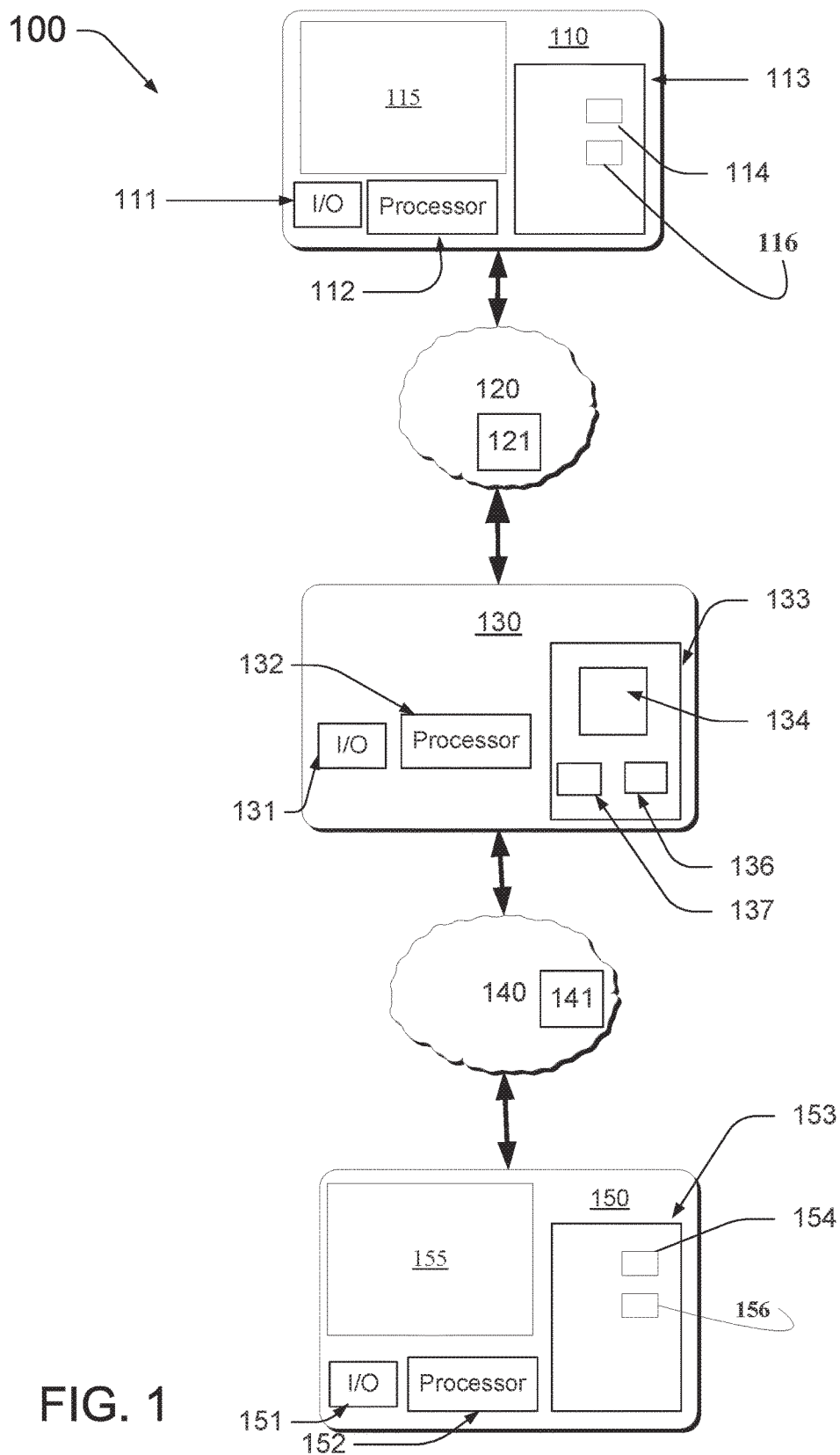
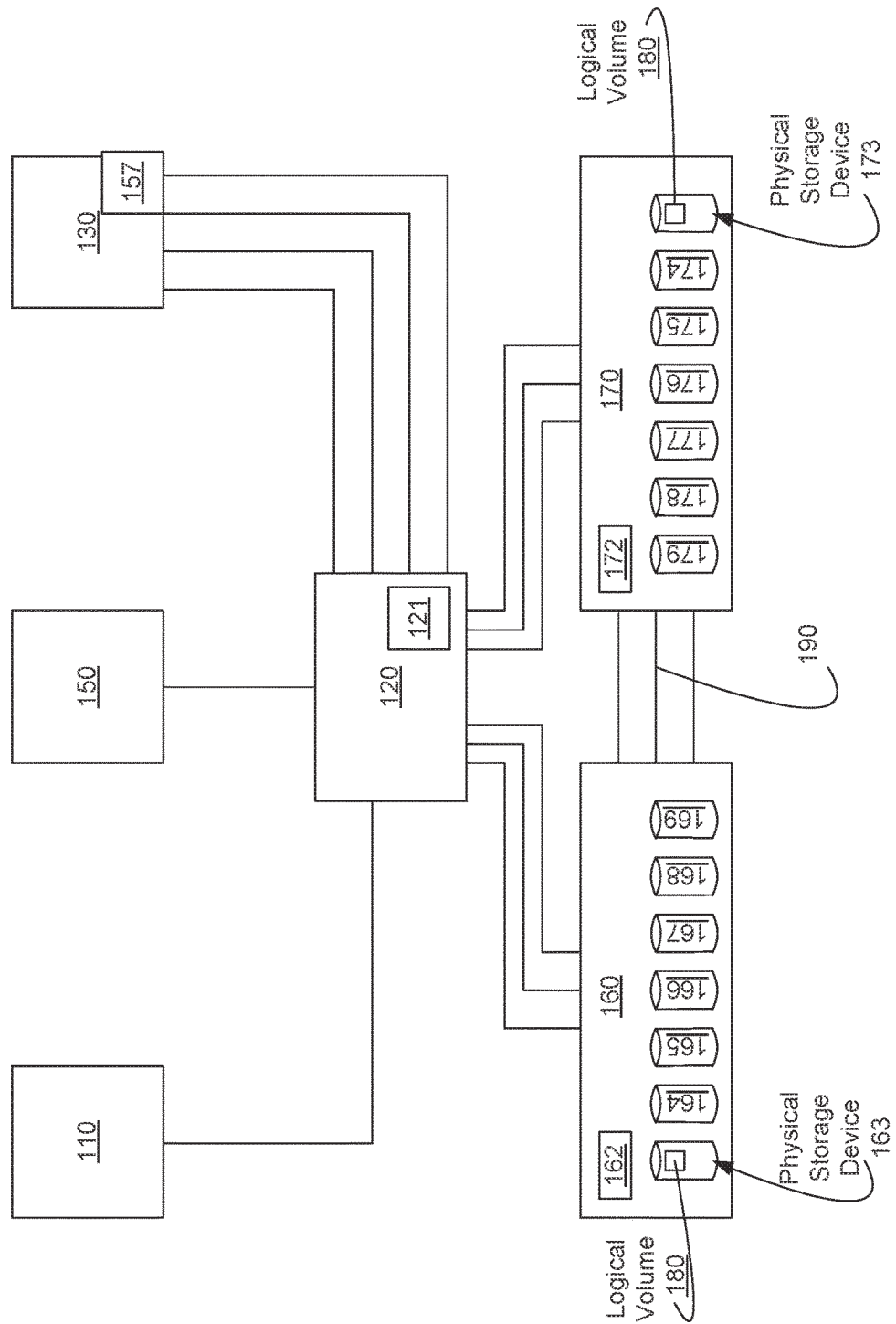


FIG. 2



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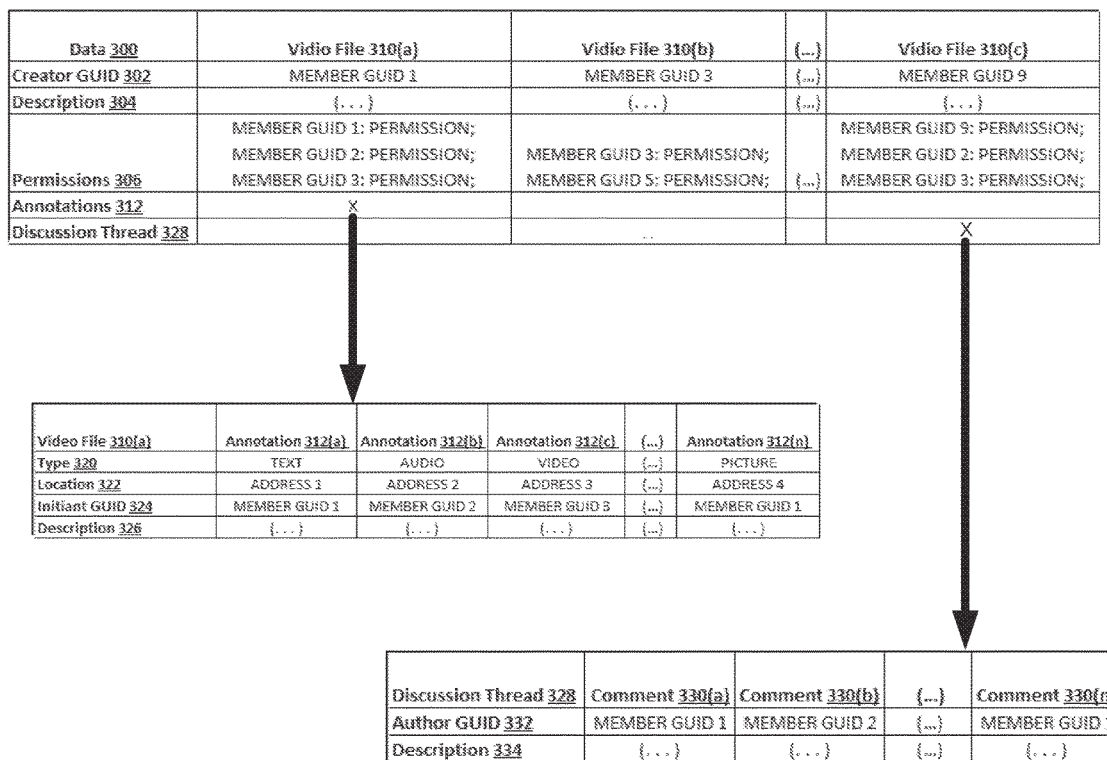


FIG. 3

FIG. 4

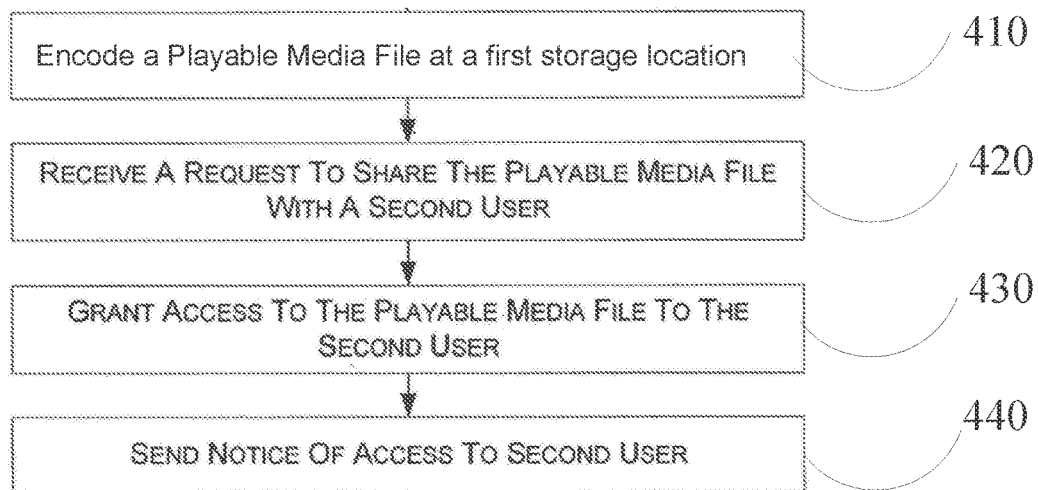


FIG. 5A

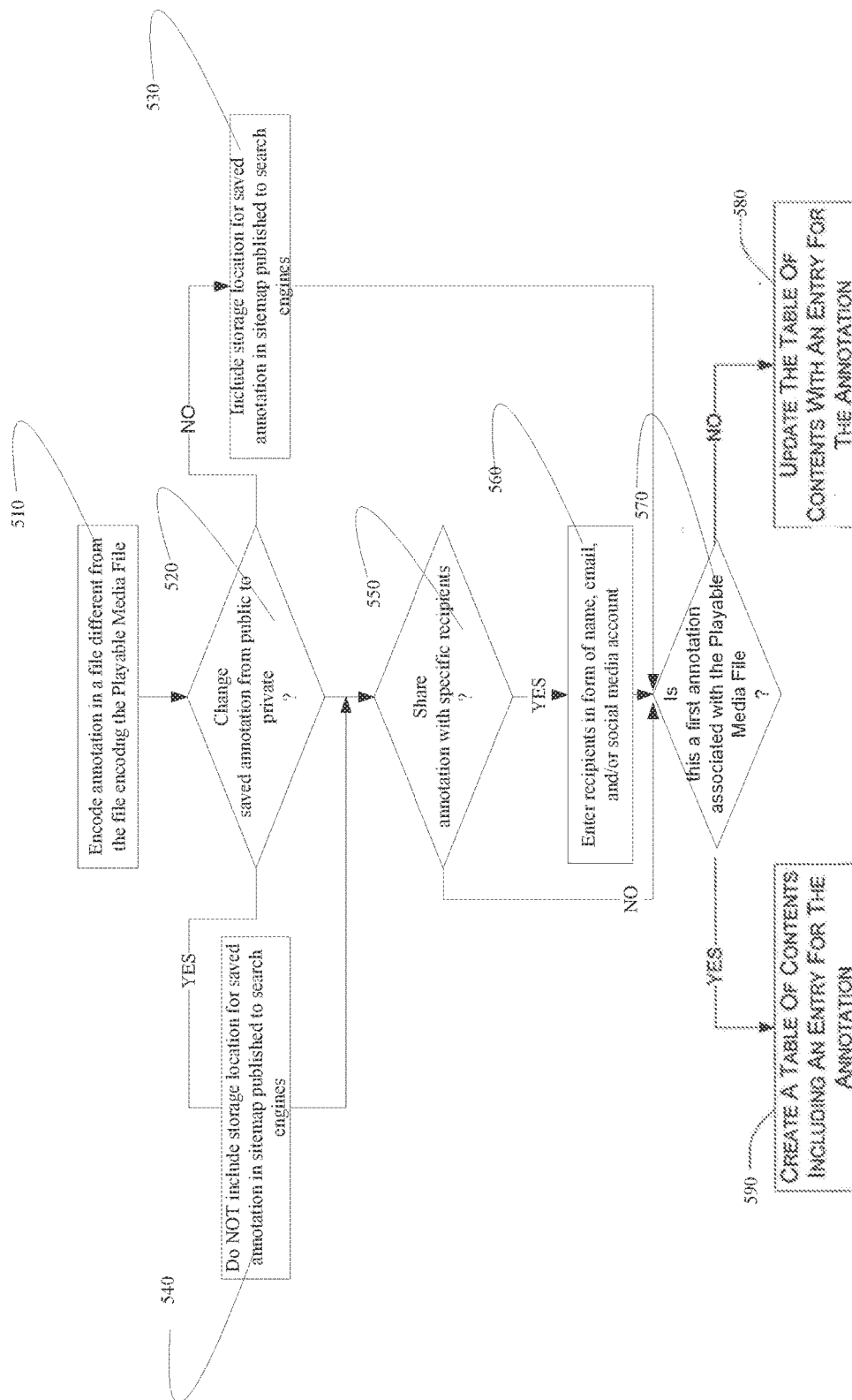


FIG. 5B

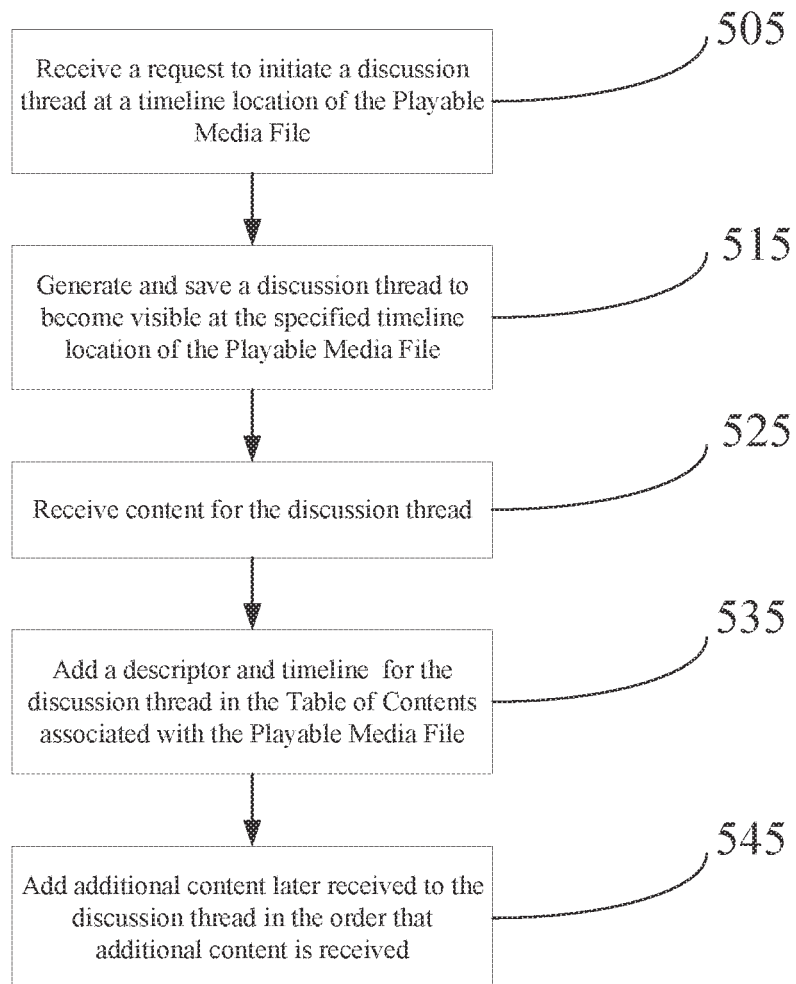


FIG. 6

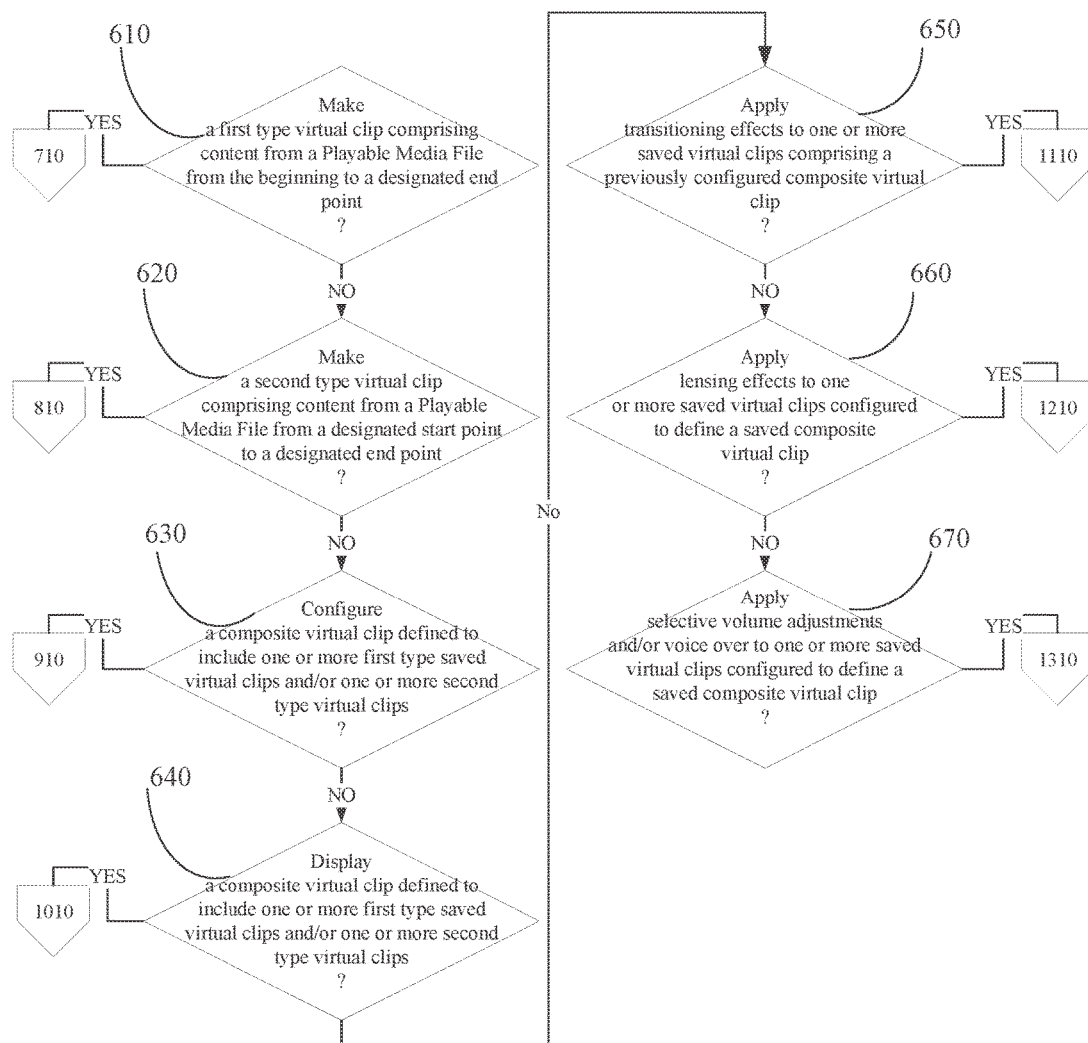


FIG. 7

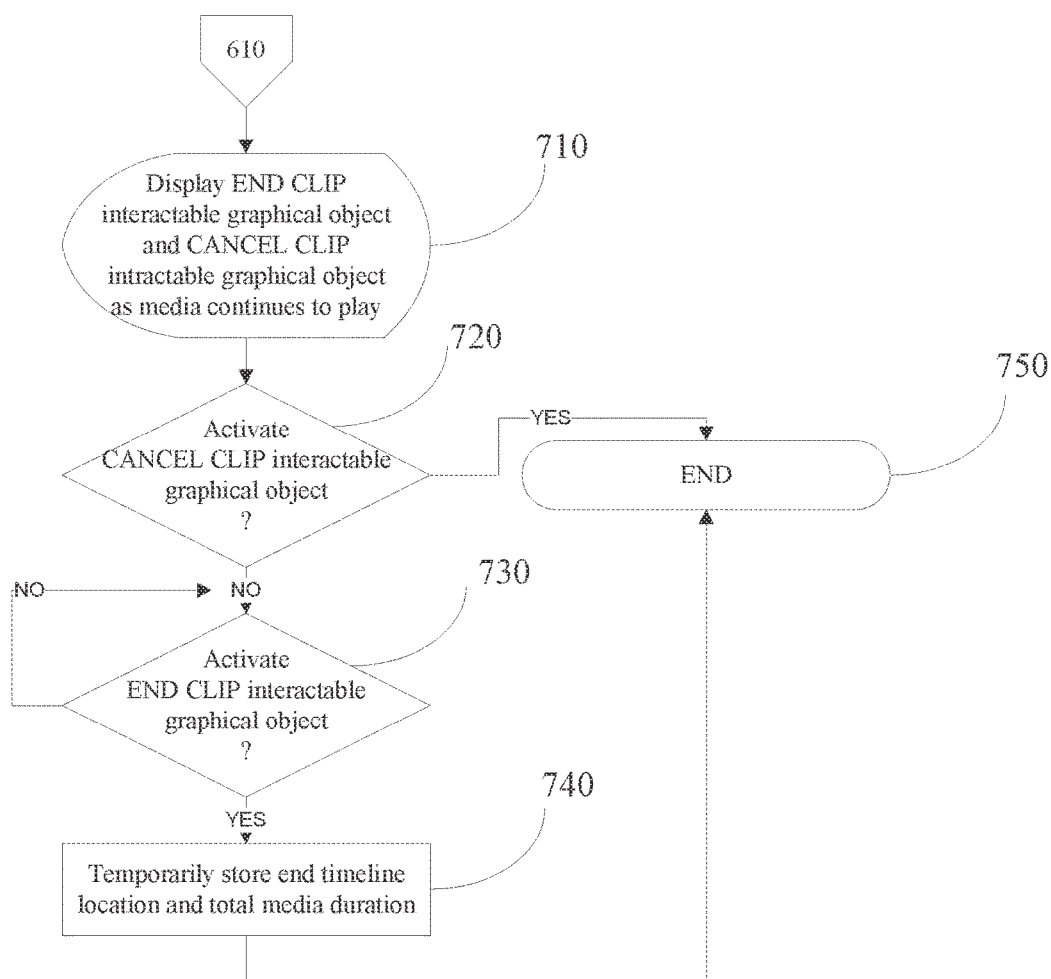


FIG. 8

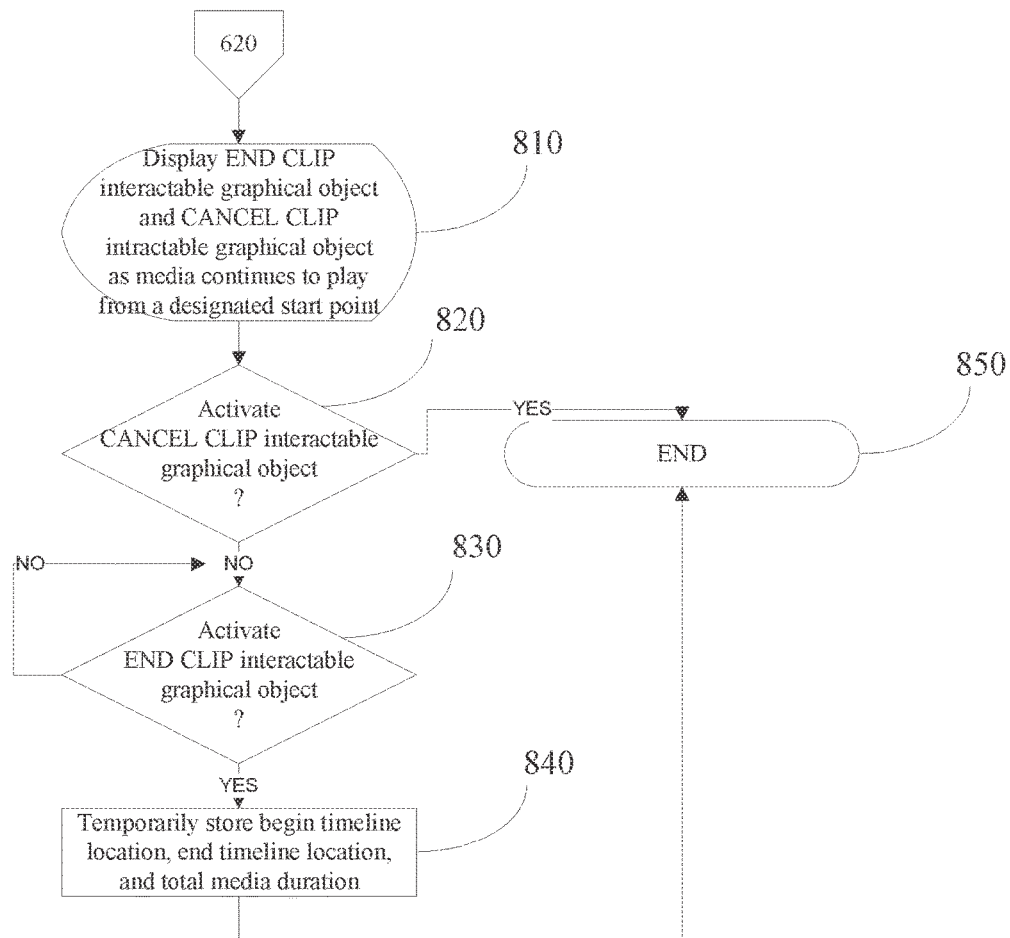


FIG. 9

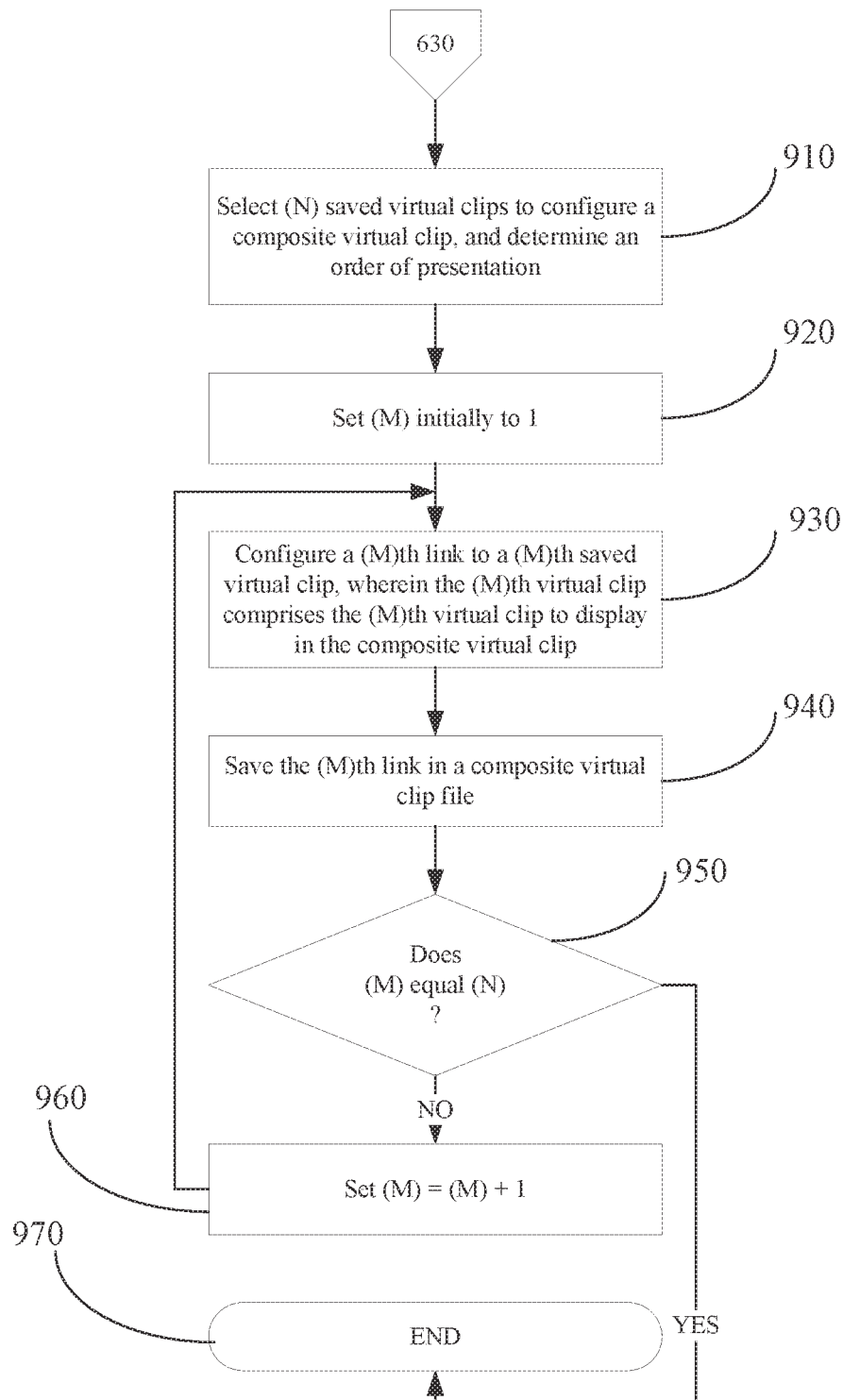


FIG. 10

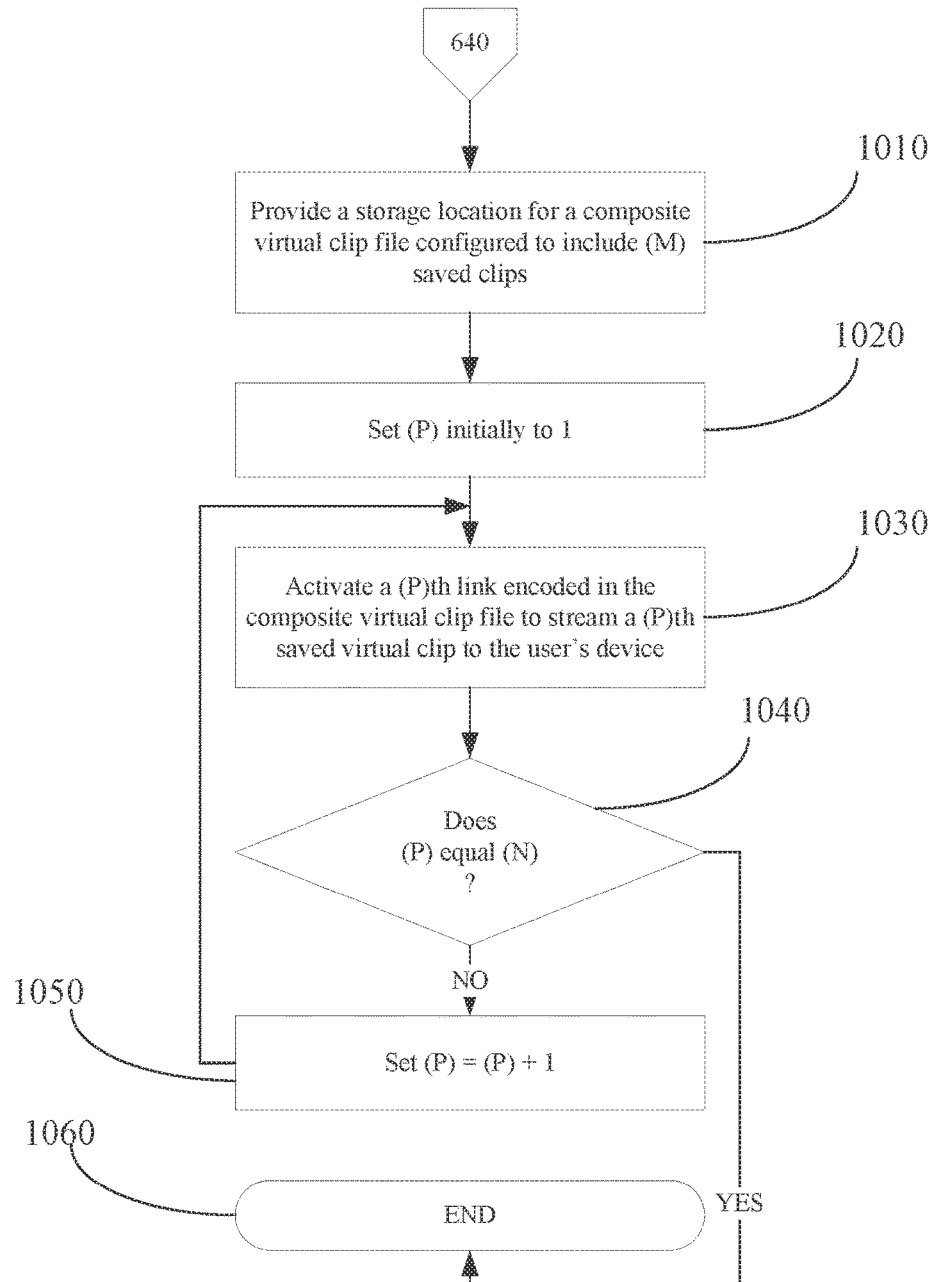


FIG. 11

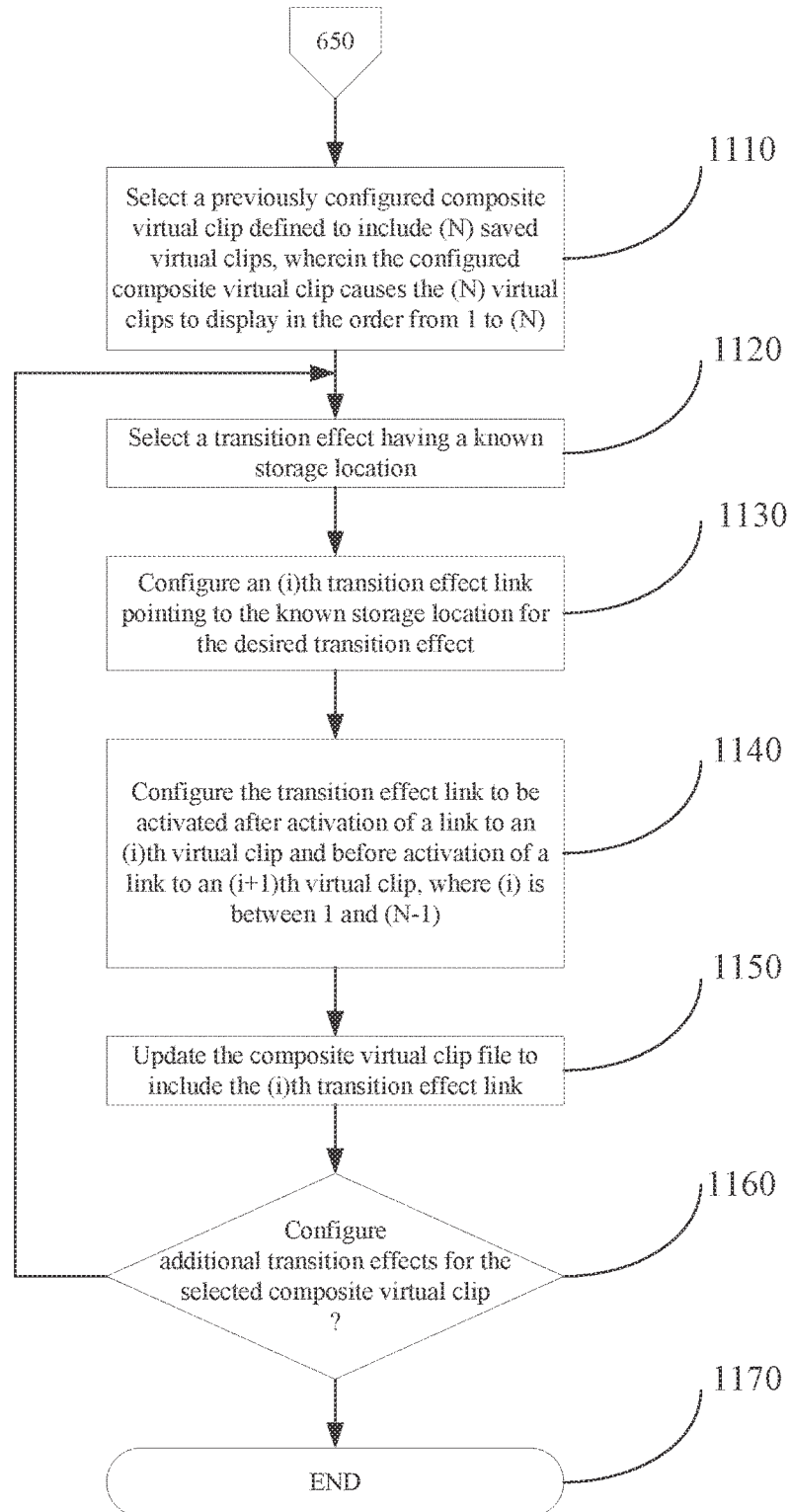


FIG. 12

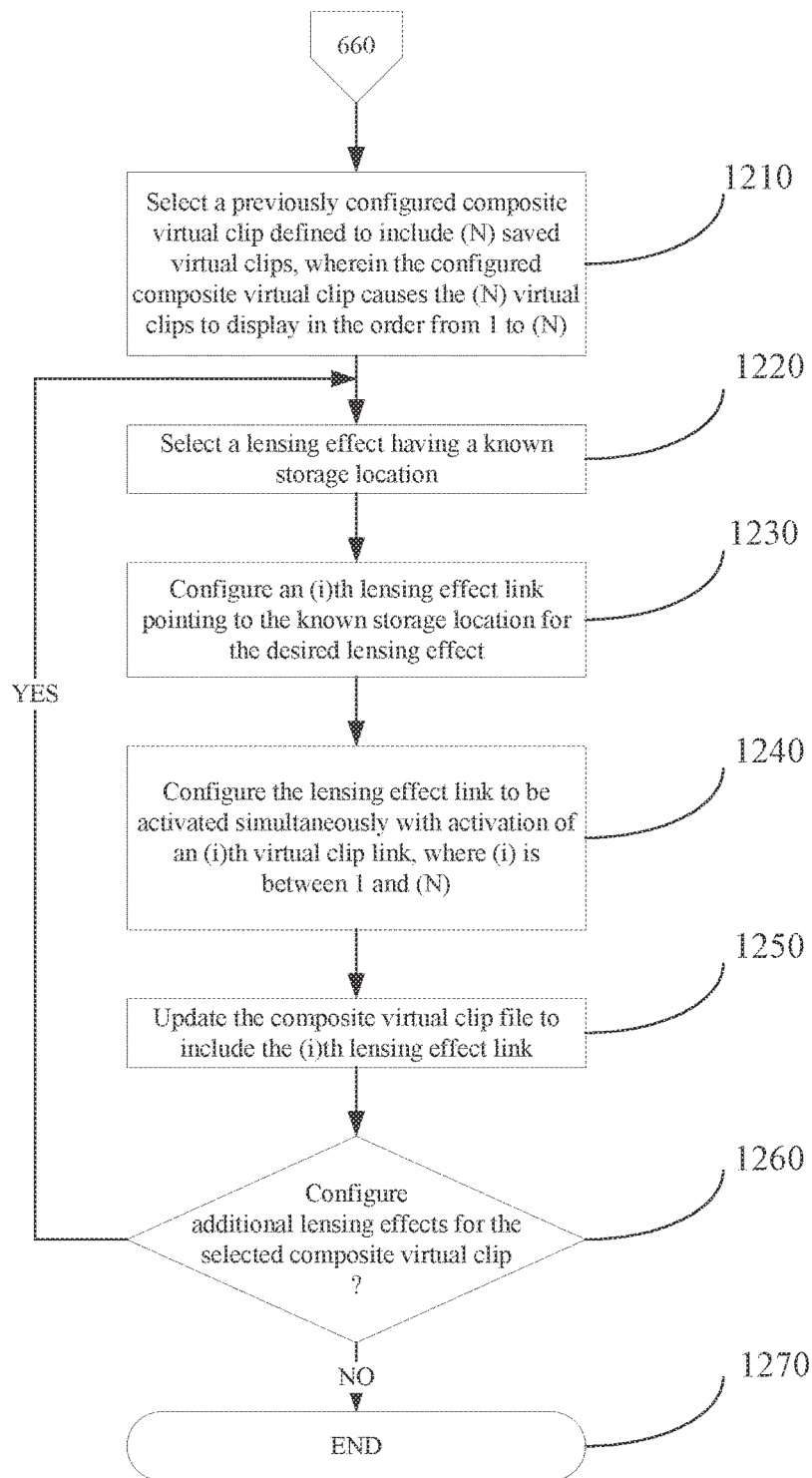
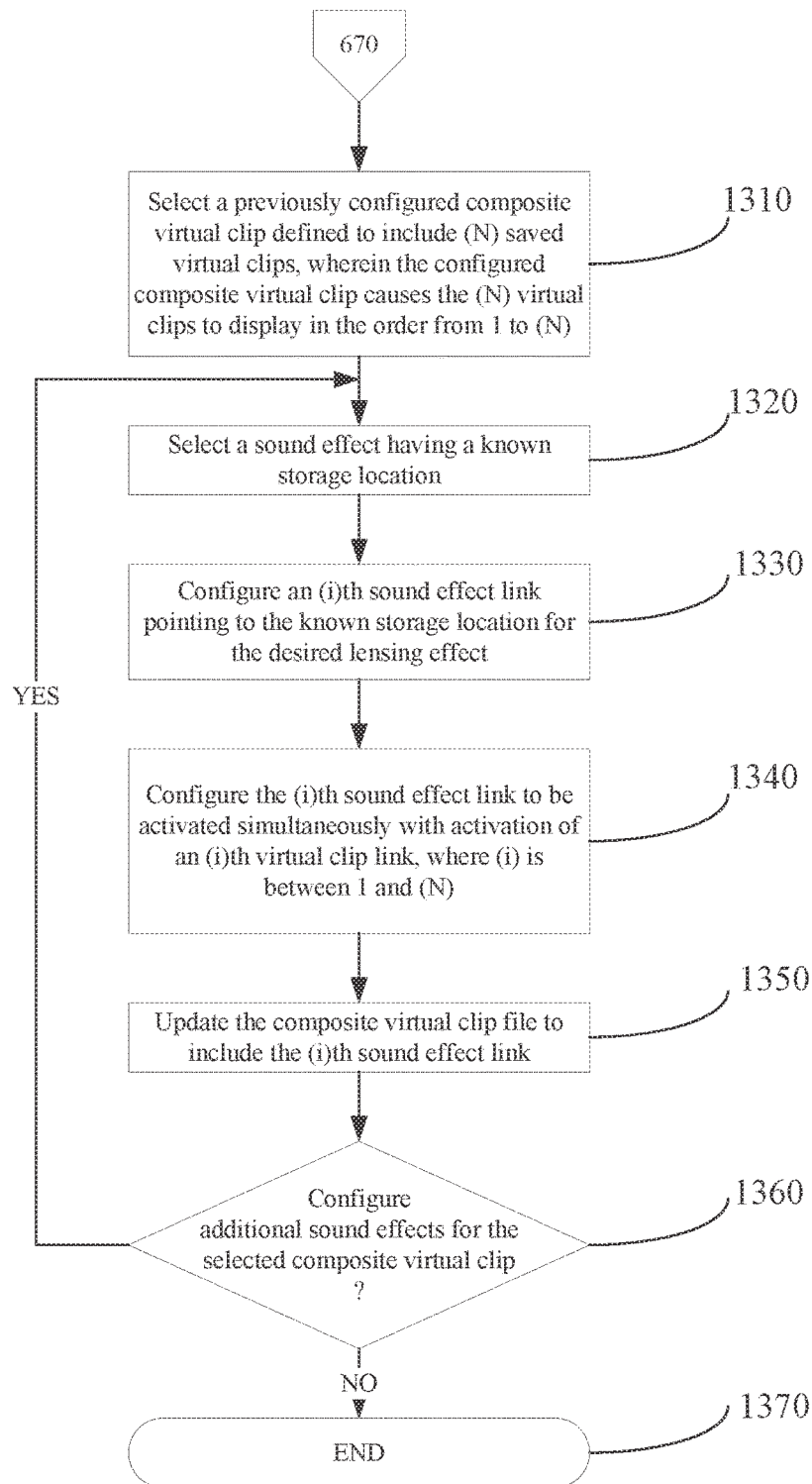


FIG. 13



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**SOCIAL NETWORKING WITH VIDEO
ANNOTATION****CROSS-REFERENCE TO RELATED
APPLICATIONS**

This is a Continuation-In-Part Patent Application of a U.S. Non-Provisional Patent Application having Ser. No. 14/170,149, filed on Jan. 31, 2104, now U.S. Pat. No. 9,451,001, which claimed priority to U.S. Provisional Patent Application having Ser. No. 61/759,219, filed on Jan. 31, 2013. The disclosure of each of the above-identified patent documents is incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

Embodiments generally relate to assemblies, methods, devices, and systems for managing information, and more particularly, to assemblies, methods, devices, and systems for sharing and annotating video data between members of a social network.

SUMMARY OF THE INVENTION

A method to create and save an annotation associated with a Playable Media File is disclosed. The method includes receiving a Playable Media File, creating an annotation relating to the Playable Media File, providing the annotation to a network server, providing a data profile to the network server, wherein the data profile comprises a location in the Playable Media File where the annotation should be made visible, determining by the network server if the annotation is a first annotation submitted for the Playable media File, if the annotation is not a first annotation submitted for the Playable Media File, encoding the data profile in a previously-created table of contents for the Playable Media File, if the annotation is a first annotation submitted for the Playable Media File, then creating a table of contents by the network server for the Playable Media File and encoding by the network server the data profile in the table of contents, wherein the Playable Media File is selected from the group consisting of an audio file, a video file, an audiovisual file, slide show, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, and MPEG file.

An article of manufacture is disclosed. Applicants' article of manufacture comprises a processor, a computer readable medium comprising computer readable program code disposed therein to create and save an annotation associated with a Playable Media File, the computer readable program code comprising a series of computer readable program steps to cause the processor to effect receiving a Playable Media File, creating an annotation relating to the Playable Media File, providing the annotation to a network server, providing a data profile to the network server, wherein the data profile comprises a location in the Playable Media File where the annotation should be made visible, determining by the network server if the annotation is a first annotation submitted for the Playable media File, if the annotation is not a first annotation submitted for the Playable Media File, encoding the data profile in a previously-created table of contents for the Playable Media File, if the annotation is a first annotation submitted for the Playable Media File, then creating a table of contents by the network server for the Playable Media File and encoding by the network server the data profile in the table of contents, wherein the Playable Media File is selected from the group consisting of an audio

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file, a video file, an audiovisual file, slide show, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, and MPEG file.

A non-transitory computer usable medium encoded with a computer program product to create and save an annotation associated with a Playable Media File and usable with programmable computer processor disposed within a controller, is disclosed. Applicants' computer program product comprises computer readable program code which causes the programmable computer processor to receive a Playable Media File, create an annotation relating to the Playable Media File, provide the annotation to a network server, provide a data profile to the network server, wherein the data profile comprises a location in the Playable Media File where the annotation should be made visible, determine by the network server if the annotation is a first annotation submitted for the Playable media File, if the annotation is not a first annotation submitted for the Playable Media File, encode the data profile in a previously-created table of contents for the Playable Media File, if the annotation is a first annotation submitted for the Playable Media File, then create a table of contents by the network server for the Playable Media File and encode by the network server the data profile in the table of contents, wherein the Playable Media File is selected from the group consisting of an audio file, a video file, an audiovisual file, slide show, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, and MPEG file.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood from a reading of the following detailed description taken in conjunction with the drawings in which like reference designators are used to designate like elements, and in which:

FIG. 1 illustrates an exemplary embodiment of a system for annotating video within a social network;

FIG. 2 illustrates another exemplary embodiment of a system for annotating video within a social network;

FIG. 3 is a table of information fields stored in association with each Playable Media File;

FIG. 4 is a flowchart of the method and/or process related to annotating Playable Media File within a social network;

FIG. 5A summarizes additional steps in Applicants' method, additional steps implemented by Applicants' article of manufacture, and additional steps performed by a programmable processor implementing Applicants' computer program product;

FIG. 5B summarizes additional steps in Applicants' method, additional steps implemented by Applicants' article of manufacture, and additional steps performed by a programmable processor implementing Applicants' computer program product;

FIG. 6 summarizes additional steps in Applicants' method, additional steps implemented by Applicants' article of manufacture, and additional steps performed by a programmable processor implementing Applicants' computer program product;

FIG. 7 summarizes additional steps in Applicants' method, additional steps implemented by Applicants' article of manufacture, and additional steps performed by a programmable processor implementing Applicants' computer program product;

FIG. 8 summarizes additional steps in Applicants' method, additional steps implemented by Applicants' article

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of manufacture, and additional steps performed by a programmable processor implementing Applicants' computer program product;

FIG. 9 summarizes additional steps in Applicants' method, additional steps implemented by Applicants' article of manufacture, and additional steps performed by a programmable processor implementing Applicants' computer program product;

FIG. 10 summarizes additional steps in Applicants' method, additional steps implemented by Applicants' article of manufacture, and additional steps performed by a programmable processor implementing Applicants' computer program product;

FIG. 11 summarizes additional steps in Applicants' method, additional steps implemented by Applicants' article of manufacture, and additional steps performed by a programmable processor implementing Applicants' computer program product;

FIG. 12 summarizes additional steps in Applicants' method, additional steps implemented by Applicants' article of manufacture, and additional steps performed by a programmable processor implementing Applicants' computer program product; and

FIG. 13 summarizes additional steps in Applicants' method, additional steps implemented by Applicants' article of manufacture, and additional steps performed by a programmable processor implementing Applicants' computer program product.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The invention is described in preferred embodiments in the following description with reference to the FIGs., in which like numbers represent the same or similar elements. Reference throughout this specification to "one embodiment," "an embodiment," or similar language means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, appearances of the phrases "in one embodiment," "in an embodiment," "in certain embodiments," and similar language throughout this specification may, but do not necessarily, all refer to the same embodiment. It is noted that, as used in this description, the singular forms "a," "an" and "the" include plural referents unless the context clearly dictates otherwise.

The described features, structures, or characteristics of the invention(s) may be combined in any suitable manner in one or more embodiments. In the following description, numerous specific details are recited to provide a thorough understanding of embodiments of the invention(s). One skilled in the relevant art will recognize, however, that the invention(s) may be practiced without one or more of the specific details, or with other methods, components, materials, and so forth. In other instances, well-known structures, materials, or operations are not shown or described in detail to avoid obscuring aspects of the invention.

The schematic flow chart diagrams included are generally set forth as a logical flowchart diagram (e.g., FIGS. 4, 5A, 5B, 6, 7, 8, 9, 10, 11, 12, and 13). As such, the depicted order and labeled steps are indicative of one embodiment of the presented method. In certain embodiments, other steps and methods are conceived that are equivalent in function, logic, or effect to one or more steps, or portions thereof, of the illustrated method. Additionally, the format and symbols employed are provided to explain the logical steps of the method and are understood not to limit the scope of the

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method. Although various arrow types and line types are employed in the flowchart diagrams, they are understood not to limit the scope of the corresponding method (e.g., FIGS. 4, 5A, 5B, 6, 7, 8, 9, 10, 11, 12, and 13). Indeed, some arrows or other connectors may be used to indicate only the logical flow of the method. For instance, an arrow indicates a waiting or monitoring period of unspecified duration between enumerated steps of the depicted method. Additionally, the order in which a particular method occurs may or may not strictly adhere to the order of the corresponding steps shown.

In certain embodiments, individual steps recited in FIGS. 4, 5A, 5B, 6, 7, 8, 9, 10, 11, 12, and 13, are combined, eliminated, or reordered.

Applicants' system and method includes a network wherein a video can be created using any available video format, and that video can be shared between a plurality of people. In certain embodiments, Applicants' system and method can be used by multiple members of a social network to associate annotations with a Playable Media File, and/or to initiate discussion threads associated with that Playable Media File.

Referring to FIG. 1, a portion of Applicants' network 100 is illustrated. In certain embodiments, Applicants' network 100 comprises a social network. In certain embodiments, Applicants' social network 100 is an open social network. In certain embodiments, Applicants' social network 100 is a closed social network.

In the illustrated embodiment of FIG. 1, network 100 comprises a network server 130 that is communicatively connected to a computing device 110 through a first communication fabric 120 and a computing device 150 through a second communication fabric 140. In certain embodiments, the network server 130 is owned and/or operated by a social networking service provider while computing devices 110 and 150 are owned and/or operated by users or members of the social network 100, where a member has a profile containing information about the member stored in information 137 of the social network server 130. In some embodiments, the computing device 110 is owned and operated by a first member and the computing device 150 is owned and operated by a second member.

For the sake of clarity, FIG. 1 shows a first computing device 110, network server 130, and a second computing device 150. FIG. 1 should not be taken as limiting. Rather, in other embodiments any number of entities and corresponding devices can be part of the network 100, and further, although FIG. 1 shows two communication fabrics 120 and 140, in other embodiments, less than, or more than, two communication fabrics are provided in the social network 100. For example, in certain embodiments, the communication fabric 120 and the communication fabric 140 are the same communication fabric.

In certain embodiments, the computing devices 110 and 150 and host 130 are each an article of manufacture. Examples of the article of manufacture include: a server, a mainframe computer, a mobile telephone, a smart telephone, a personal digital assistant, a personal computer, a laptop, a set-top box, an MP3 player, an email enabled device, a tablet computer, a web enabled device, or other special purpose computer each having one or more processors (e.g., a Central Processing Unit, a Graphical Processing Unit, or a microprocessor) that are configured to execute Applicants' API to receive information fields, transmit information fields, store information fields, or perform methods.

By way of illustration and not limitation, FIG. 1 illustrates the computing device 110, the network server 130, and the

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computing device **150** as each including a processor **112**, **132**, and **152**, respectively, a non-transitory computer readable medium **113**, **133**, and **153**, respectively, having a series of instructions **114**, **134**, and **154**, respectively, encoded therein, an input/output means **111**, **131**, and **151**, respectively, such as a keyboard, a mouse, a stylus, touch screen, a camera, a scanner, or a printer. Computer readable program code **114**, **134**, and **154** is encoded in non-transitory computer readable media **113**, **133**, and **153**, respectively. Processors **112**, **132**, and **152** utilize computer readable program code **114**, **134**, and **154**, respectively, to operate computing devices **110**, **130**, and **150**, respectively. In certain embodiments, the computing device **110**, **130**, and **150** employ hardware and/or software that supports accelerometers, gyroscopes, magnetometers (e.g., solid state compasses) and the like.

Processors **112** and **152** utilize Applicants' Application Program Interfaces (APIs) **116** and **156**, respectively, encoded in computer readable media **113** and **153**, respectively, to communicate with host **130** and access Applicants' algorithm **136** encoded in computer readable medium **133** to implement Applicants' social network and method described herein. Algorithm **136** comprises Applicants' source code to operate a public or private social network, and when implemented by computing device **110** causes a graphic user interface ("GUI") to be displayed on display screen **115**, wherein that GUI comprises and displays a plurality of graphical interactable objects. A member using computing device **110** (or computing device **150**) can utilize that GUI to access a logical volume, such as for example and without limitation logical volume **180** (FIG. 2), wherein information specific to that user are encoded in logical volume **180**. The member and/or user can further utilize the GUI to access Applicants' social network as described herein.

Processor **132** accesses the computer readable program code **134**, encoded on the non-transitory computer readable medium **133**, and executes an instruction **136** to electronically communicate with the computing device **110** via the communication fabric **120** or electronically communicate with the computing device **150** via the communication fabric **140**. Encoded information **137** includes, for example and without limitation, the data communicated or information fields communicated, e.g., date and time of transmission, frequency of transmission and the like, with any or all of the computing device **110** and the computing device **150**. In certain embodiments, information **137** is analyzed and/or mined. In certain embodiments, information **137** is encoded in a plurality of individual logical volumes specific to each member/user.

In certain embodiments, computing devices **110** and **150** further comprise one or more display screens **115** and **155**, respectively. In certain embodiments, display screens **115** and **155** comprise an LED display device.

In certain embodiments, the information fields received from the computing device **110** at the network server **130** are exchanged with other computing devices not shown in FIG. 1. For example, information fields received from a social network in which the member has an Internet presence is sent to the social network server **130** and stored at the information **137** in association with a profile of the member. Alternatively, or in combination, the information fields transmitted from the computing device **110** to the social network server **130** is sent to an account of the member within the social network.

In certain embodiments, information **137** is encoded in one or more hard disk drives, tape cartridge libraries, optical disks, combinations thereof, and/or any suitable data storage

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medium, storing one or more databases, or the components thereof, in a single location or in multiple locations, or as an array such as a Direct Access Storage Device (DASD), redundant array of independent disks (RAID), virtualization device, etc. In certain embodiments, information **137** is structured by a database model, such as a relational model, a hierarchical model, a network model, an entity-relationship model, an object-oriented model, or a combination thereof. For example, in certain embodiments, the information **137** is structured in a relational model that stores a plurality of Identities for each of a plurality of members as attributes in a matrix.

In certain embodiments, the computing devices **110**, **130**, and **150** include wired and/or wireless communication devices which employ various communication protocols including near field (e.g., "Blue Tooth") and/or far field communication capabilities (e.g., satellite communication or communication to cell sites of a cellular network) that support any number of services such as: telephony, Short Message Service (SMS) for text messaging, Multimedia Messaging Service (MMS) for transfer of photographs and videos, electronic mail (email) access, or Global Positioning System (GPS) service, for example.

As illustrated in FIG. 1, the communication fabrics **120** and **140** each comprise one or more switches **121** and **141**, respectively. In certain embodiments, communication fabrics **120** and **140** are the same. In certain embodiments, at least one of the communication fabrics **120** and **140** comprises the Internet, an intranet, an extranet, a storage area network (SAN), a wide area network (WAN), a local area network (LAN), a virtual private network, a satellite communications network, an interactive television network, or any combination of the foregoing. In certain embodiments, at least one of the communication fabrics **120** and **140** contains either or both wired or wireless connections for the transmission of signals including electrical connections, magnetic connections, or a combination thereof. Examples of these types of connections include: radio frequency connections, optical connections, telephone links, a Digital Subscriber Line, or a cable link. Moreover, communication fabrics **120** and **140** utilize any of a variety of communication protocols, such as Transmission Control Protocol/Internet Protocol (TCP/IP), for example.

Referring to FIG. 2, the computing devices **110**, **130** and **150** are each communicatively connected to the communication fabric **120**, such as a WAN or Internet. The network server **130** is a computing device that is owned and/or operated by a networking service provider, and computing devices **110** and **150** are owned and/or operated by individual network users. In certain embodiments, network server is owned and/or operated by a social network provider. In certain embodiments, the network server **130** provides access to the computing devices **110** and **150** to execute Applicants' source code **136** via a Software as a Service (SaaS) means.

In certain embodiments information fields are received from one or more computing devices **110**, **130** and/or **150** and stored on the "Cloud" such as data storage library **160** and/or **170**. Referring to FIG. 2, each of the data storage libraries **160** and **170** have corresponding physical storage devices, such as and without limitation physical data storage devices **163-169** for data storage library **160** and **173-179** for data storage library **170**.

In certain embodiments, data storage library **160** and data storage library **170** are configured in a Peer To Peer Remote Copy ("PPRC") storage system, wherein the information fields in data storage library **160** is automatically backed up

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in data storage library 170. In certain embodiments, Applicants' PPRC storage system utilizes synchronous copying. In certain embodiments, Applicants' PPRC storage system utilizes asynchronous copying.

In the illustrated embodiment of FIG. 2, physical storage device 163 is configured to comprise logical volume 180. In certain embodiments, each physical storage device in data storage library 160 is configured to comprise a plurality of logical volumes. Similarly, each physical storage device in data storage library 170 is configured to comprise a corresponding plurality of logical volumes. In certain embodiments, each member of the social network is assigned a unique logical volume. In such embodiments a permission file 157 may be encoded in computer readable medium 133 or in data storage libraries 160 and 170 that associates each logical volume with a social network member and further associates each logical volume with access permissions for certain designated other social network users. Each social network user configures his/her own logical volume permissions. In certain embodiments, if a first user desires to remove access permissions from a second user, that first member simply accesses his/her permissions file and deletes the second user. Thereafter, the second user cannot retrieve data stored on the logical volume associated with the first user.

Referring to FIGS. 1, 2, and 3, Applicants algorithm 136, and its functions, can be accessed by users of Applicants' network 100 to create, share, edit, associate one or more annotations with, and/or associate one or more discussion threads with, a Playable Media File. One member, using a computing device such as computing device 110 or 150, to access network server 130, streams a Playable Media File from its original storage location. In certain embodiments the Playable Media File is encoded in a unique logical volume accessible by a first user. That first user can grant access to the Playable Media File to one or more other users by storing access permissions in permission file 157. In certain embodiments the access includes levels such as, and without limitation, view only, view/edit, view/edit/share, and the like. In certain embodiments the access includes conditions or restrictions such as expirations dates, limitations on the number of times the file can be viewed, and the like.

Referring now to 3, when a user having permission streams the Playable Media file, and if that user associates an annotation with the Playable Media File, a data profile 300 is created for the Playable Media File and is stored on network server 130, and optionally on data storage library 160 or 170. Data profile 300 includes various information fields, including the Global Unique Identifier (GUID) 302 associated with the creating member, a description 304 of the Playable Media File (e.g., a title), and permissions 306 held by various members to access, edit, and/or share the Playable Media File. Data profile 300 may further include subsequently added annotations 312 and discussion threads 328.

Applicants algorithm 136 provides the ability for each user having access to the Playable Media File to associate annotations for display at various timeline locations as the Playable Media File is streamed from its original storage location. Such annotations may be any known format and may include text, video, audio, pictures, or a combination thereof, and are stored as a separate file. When subsequent viewers execute the Playable Media File the annotation(s) will be visible at the specified time segment. In certain such embodiments, the annotation is shown in the same window as the Playable Media File and may be visible over the

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Playable Media File. In other embodiments, the annotation is shown in a separate window. Applicants' algorithm 136 generates a timeline which displays when the Playable Media File is streamed.

In certain embodiments, the member creating the annotation can set permissions for the annotation, restricting who can view or edit the annotation. In such embodiments, the permissions are stored in permission file 157. Referring now to FIG. 4, in step 410 a first network user encodes a first Playable Media file in a first storage location. In step 420, the first user receives a request to share the first Playable Media File with a second network user. In step 430, the first network user grants access to the first Playable Media File to the requesting second network user. The first user's grant of access right to the second network user is encoded in a permission file 157. In step 440, the network server provides notice to the second network user regarding that second user's access privilege(s) to access the first Playable Media File from the first storage location. In certain embodiments the notice may further include a link to the Playable Media File or information about where and how to access the Playable Media File.

For those Playable Media Files having annotations, data profile 300 further contains information fields concerning each annotation 312(a)-(n), including one or more of the type 320 of the annotation (text, audio, video, picture, etc.), the location 322 of the associated annotation within the Playable Media File, the GUID 324 of the member who initiated the annotation, and a description 326 for the annotation, such as a title or other descriptor.

In certain embodiments Applicants' algorithm 136 further generates a table of contents of the annotations added to the Playable Media File using the information in data profile 300, including a link to each annotation. The link may be in the form of a pointer, electronic bookmark, hyperlink, or any other type of link. Where the link is a hyperlink, the hyperlink may link to an annotation that is saved as a different file on data storage library 160 or 170. In certain embodiments, annotation(s) may be viewed and edited separately from the Playable Media File. For each new annotation added to the Playable Media File, Applicants' algorithm 136 updates the table of contents. In such embodiments, the table of contents may include one or more of a caption or other description of the annotation, the time of the annotation within the Playable Media File, the author of the annotation, and the date and/or time the annotation was made.

FIG. 5 summarizes Applicants' method to save and share annotations associated with a Playable Media File. Referring now to FIG. 5, in step 510 the method encodes an annotation to be associated with a Playable Media File in a storage location, i.e. a file, that differs from the Playable Media File. In certain embodiments, step 510 is performed by Applicants' algorithm 136. In certain embodiments, step 510 is performed by the user creating the annotation.

In certain embodiments, the "visibility" for annotation saved in step 510 is by default defined as "public," meaning that any other user who has permission to stream the Playable Media File has permission to stream that "public" annotation. In step 520, Applicants' method determines whether to change that "visibility" from "public" to "private."

If the method elects in step 520 not to change the visibility from public to private, then the method transitions from step 520 to step 530 and includes a storage location for the saved annotation in a sitemap published to search engines. Applicants' method transitions from step 530 to step 570.

Alternatively, if the method elects in step 520 to change the visibility from public to private, then the method transitions from step 520 to step 540 and does not include a storage location for the saved annotation in a sitemap published to search engines. In certain embodiments, step 540 is performed by Applicants' network server 130. In certain embodiments, step 540 is performed by Applicants' algorithm 136.

Applicants' method transitions from step 540 to step 550 wherein the method determines whether to share the saved annotation to specific recipients. In certain embodiments, step 550 is performed by Applicants' network server 130. In certain embodiments, step 550 is performed by Applicants' algorithm 136.

If Applicants' method elects in step 550 to not share the annotation with specific recipients, then the method transitions from step 550 to step 570. Alternatively, if Applicants' method elects in step 550 to share the annotation with specific recipients, then the method transitions from step 550 to step 560 wherein the user is prompted to enter recipients in the form of name(s), and/or email address, and/or social media account. Applicants' method transitions from step 560 to step 570.

In step 570, the method determines if the annotation encoded in step 510 is the first annotation for the Playable Media File. If the method determines if the annotation saved in step 510 comprises a first annotation for the Playable Media File, then the method transitions to step 590 wherein a table of contents is created for the Playable Media File. Alternatively, if the annotation is not the first and the Playable Media File already has a table of contents, then the method transitions to step 580 wherein the method updates the table of contents to include an entry for the saved annotation of step 510. For example, upon receipt of an annotation from computing device 150 of the second user, network server 130 determines if the Playable Media File already has annotations (and thus a table of contents) by checking annotations field 312 (FIG. 3) of data profile 300. If no annotations are included in the Playable Media File, the network server 130 creates a table of contents using the data in data profile 300 and the annotation and any related information received from computing device 150. In certain embodiments the table of contents is then saved separately from the Playable Media File. In certain embodiments, the table of contents is stored on Applicants' network server 130. In certain such embodiments, the table of contents is associated with the Playable Media File such that it is always presented to a user viewing the Playable Media File. In other embodiments, the table of contents may be viewed separately from the Playable Media File.

Referring now to FIG. 5B, in certain embodiments, Applicants' method can initiate a discussion thread to be displayed at a specific timeline location of the Playable Media File. In step 505, Applicants' network server receives a request from a member to initiate a discussion thread at a specified timeline location in the Playable Media File. In step 515, Applicants' algorithm 136 generates the discussion thread to become visible when the Playable Media File is streamed and viewed at the timeline specified. In certain embodiments the request further includes a type identifier indicating whether the discussion thread is to be open or closed. Where the open identifier is provided, the discussion thread is open to all members and therefore any member may view and add a comment to the discussion thread. Where the closed identifier is provided, the discussion thread is private and only available to particular members. In such embodiments the request provided by the initiating

member includes identifiers for one or more members that are to have access to the discussion thread. In certain such embodiments Applicants' algorithm 136 further sends invitations to the identified members to invite them to participate in the thread. In certain such embodiments, the permissions given to various members to access and participate in the discussion thread is stored in permissions file 157.

Members having access to the Playable Media File can then add written, audible, pictorial, or video comments to the thread. In step 525, Applicants network server receives content for inclusion in the discussion thread. In step 535, Applicants' method adds a descriptor and a timeline for the discussion thread in a Table of Contents associated with the Playable Media File. In step 545, additional content for the discussion thread that is later received is added to the discussion thread in the order received. Further in step 545, a descriptor for that later-added content is added to the Table of Contents.

In certain embodiments only members having edit privileges can post in the discussion thread. In certain embodiments only individuals having specific discussion thread privileges can post in the discussion thread. In certain embodiments, the privilege to post in a thread is specific to the particular thread, and therefore a member may have access to post in one thread but not another. In certain embodiments, the discussion thread is visible to any individual viewing the Playable Media File. In other embodiments, the discussion thread is visible only to certain individuals, such as those that have been given specific access to the thread or those that have edit privileges for the video.

For Playable Media Files having discussion threads, data profile 300 further includes information fields for each discussion thread 328, including for each comment 330(a)-(n) made in the discussion thread by a member, the GUID of the member author of the comment, and a description 334, which may be the comment itself or another identifier.

Applicants further disclose an article of manufacture comprising a platform for information management, such as computing device 110, 130, and/or 150, comprising computer readable program code, such as API 116, API 156, and/or Applicants' social network source code 136, residing in a non-transitory computer readable medium, such as computer readable medium 113, 133, and/or 153, where that computer readable program code can be executed by a processor, such as processor 112 (FIG. 1) and/or 132 (FIG. 1), and/or 152, to implement Applicants' method recited in FIGS. 4, 5A, 5B, 6, 7, 8, 9, 10, and 11.

Applicants further disclose a non-transitory computer readable medium wherein Applicants' computer program product is encoded herein. Applicants' computer program product comprises computer readable program code that can be executed by a programmable processor to implement Applicants' method recited in FIGS. 4, 5A, 5B, 6, 7, 8, 9, 10, and 11. In either case, in certain embodiments, the computer readable program code is encoded in a non-transitory computer readable medium comprising, for example, a magnetic information storage medium, an optical information storage medium, an electronic information storage medium, and the like. "Electronic storage media," means, for example and without limitation, one or more devices, such as and without limitation, a PROM, EPROM, EEPROM, Flash PROM, compactflash, smartmedia, and the like.

Referring now to FIG. 6, in step 610 Applicants disclose determining whether to create a plurality of virtual clips, wherein each virtual clip comprises content encoded in one or more Media File, playable or static, from a beginning of the Media File, playable or static, up to a designated end

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point, wherein “Media File, playable or static,” means a file selected from the group consisting of an audio file, a video file, an audiovisual file, slide show file, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, MPEG file, an image file (JPG, TIF, PNG, GIF, Bitmap, and the like), a PDF file, a text file, a VISIO file, a .ppt file, a .key file, a spreadsheet file, and any type of 3D media file. In certain embodiments, such a 3D media file requires holographic projection/holographic viewing. In certain embodiments, “Media File, playable or static,” further includes any file which generates a Stereoscopic visual display that can be viewed through stereoscopic eyewear or played on 3D display technology such as 3D TV, and in certain embodiments comprises a Virtual Reality/Augmented Reality file that can be viewed through Virtual Reality devices such as Hololense, Oculus Rift, Sony Playstation VR, HCT VIVE, Razer OSBR HDK, Zeiss VR1, SOV VR, Freefly, and the like.

If a user elects to create such a plurality of virtual clips, the method transitions from step 610 to step 710 (FIG. 7). Referring now to FIG. 7, in step 710 the method, without pausing the media play, displays an END CLIP interactable graphical object and a CANCEL CLIP interactable graphical object.

If the user activates the CANCEL CLIP interactable graphical object in step 720, then the method transitions from step 720 to step 750 and ends. Alternatively, if the user does not activate the CANCEL CLIP interactable graphical object in step 710, then the method transitions from step 710 to step 730 wherein the method determines if the END CLIP interactable graphical object has been activated. If the method determines in step 730 that the END CLIP interactable graphical object has not been activated, then the method pauses at step 730 until the user activates the END CLIP interactable graphical object, wherein the method transitions from step 730 to step 740 wherein the method temporarily stores a begin time, end time, and total media duration.

In certain embodiments, in step 740 an end timeline location, and the total media duration are saved to the user’s computing device. In certain embodiments, in step 740 the begin time, the end time, and a total media duration are saved to Applicants’ network server 130 (FIG. 1).

If the user elects in step 610 NOT to create a plurality of virtual clips each from a beginning to a designated end point, then the method transitions from step 610 to step 620 wherein the method may elect to create a plurality of virtual clips comprising content from one or more Media File, playable or static from a designated start point to a designated end point. If the user elects to create a plurality of virtual clips, where each virtual clip comprises content from one or more Media File, playable or statics, and wherein the user specifies a designated timeline location to begin the virtual clip, then the method transitions from step 620 to step 810 (FIG. 8).

Referring now to FIG. 8, in step 810 the method streams the Media File, playable or static from a designated start point, and without pausing the media play, displays an END CLIP interactable graphical object and a CANCEL CLIP interactable graphical object.

If the user activates the CANCEL CLIP interactable graphical object in step 820, then the method transitions from step 820 to step 850 and ends. Alternatively, if the user does not activate the CANCEL CLIP interactable graphical object in step 810, then the method transitions from step 810 to step 830 wherein the method determines if the END CLIP interactable graphical object has been activated. If the method determines in step 830 that the END CLIP inter-

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actable graphical object has not been activated, then the method pauses at step 830 until the user activates the END CLIP interactable graphical object, wherein the method transitions from step 830 to step 840 wherein the method temporarily stores a begin time, end time, and total media duration.

In certain embodiments, in step 740 a begin timeline location, an end timeline location, and the total media duration are saved to the user’s computing device. In certain embodiments, in step 740 the begin time, the end time, and a total media duration are saved to Applicants’ network server 130 (FIG. 1).

If the user elects in step 610 NOT to create a plurality of virtual clips each from a beginning to a designated end point, and if the user elects NOT to create a plurality of virtual clips, where each virtual clip comprises content from one or more Media File, playable or statics, and wherein the user specifies a designated timeline location to begin the virtual clip, then the method transitions from step 620 to step 630 wherein the method determines if the user elects to configure a composite virtual clip.

If the user elects to configure a composite virtual clip in step 630, the method transitions from step 630 to step 910. Referring now to FIG. 9, in step 910 the method selects (N) saved virtual clips to configure a composite virtual clip, and determines an order of presentation for those (N) virtual clips.

In step 920, the method sets (M) initially to 1. In step 930, the method configures a (M)th link to a (M)th saved virtual clip, wherein the (M)th saved virtual clip will be the (M)th virtual clip to be displayed when the composite virtual clip is activated. In step 930, the method saves the (M)th link in a composite virtual clip file.

In step 950, the method determines if (M) equals (N), i.e. if all (N) links to the (N) selected (N) saved virtual clips have been created and saved. If the method determines in step 950 that (M) does not equal (N), then the method transitions from step 950 to step 960 wherein the method increments (M) by 1, i.e. sets (M) equal to (M)+1. The method transitions from step 960 to step 930 and continues as described herein. Alternatively, if the method determines in step 950 that (M) equals (N), then the method transitions from step 950 to step 970 and ends.

If the user elects in step 610 NOT to create a plurality of virtual clips each from a beginning to a designated end point, and if the user elects in step 620 NOT to create a plurality of virtual clips, where each virtual clip comprises content from one or more Media File, playable or statics, and wherein the user specifies a designated timeline location to begin the virtual clip, and if the user does NOT elect in step 630 to configure a composite virtual clip in step 630, then in step 640 the method determines whether to display a composite virtual clip.

If the user elects to display a composite virtual clip in step 640, the method transitions to step 1010 where the method provides a storage location for a composite virtual clip file configured to access (M) saved clips. In step 1020, the method sets (P) initially to 1. In step 1030 the method activates a (P)th link encoded in the composite virtual clip file to stream a (P)th saved virtual clip to the users device.

In step 1040 the method determines if all (N) clips comprising the selected composite virtual clip have been displayed, i.e. if (P) equals (N). If the method determines in step 1040 that (p) does not equal (N), then the method transitions from step 1040 to step 1050 and increments (P) by 1, i.e. sets (P) equal to (P)+1. The method transitions from step 1050 to step 1030 and continues as described herein.

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Alternatively, if the method determines in step 1040 that (P) equals (N), the method transitions to step 1060 and ends.

If a user elects in step 650 to apply one or more transitioning effect to one or more saved virtual clips, then the method transitions from step 650 to step 1110. As those skilled in the art will appreciate, a “transition” comprises an animation-like effect when Applicants’ method to display a composite virtual clip moves from one previously saved virtual clip to a next previously saved virtual clip during an on-screen presentation. Applicants’ method allows control the speed of each transition effect. In addition, Applicants’ method also permits the addition of sound transitions when moving from a saved virtual clip to the next saved virtual clip.

If a user desires in step 650 to add one or more transition effects to a previously configured composite virtual clip, Applicants’ method transitions from step 650 to step 1110 (FIG. 11). Referring now to FIG. 11, in step 1110 the method selects a previously configured composite virtual clip, wherein that composite virtual clip is configured to include (N) previously saved virtual clips in an order from 1 to (N).

In step 1120, the method selects a transition effect having a known storage location. In step 1130, the method configures an (i)th transition effect link pointing to the known storage location for the desired transition effect.

In step 1140, the method configures the (i)th transition effect link to be activated after activation of a link to an (i)th virtual clip and before activation of a link to an (i+1)th virtual clip. In step 1150, the method updates the composite virtual clip file to include the (i)th transition effect link.

In step 1160, the method determines if the user desires to configure additional transition effects for the selected composite virtual clip. If the user elects to configure additional transition effect links, then the method transition from step 1160 to step 1120 and continues as described herein. Alternatively, if the user does not elect to configure additional transition effect links, then the method transition from step 1160 to step 1170 and ends.

If a user desires in step 660 to add one or more lensing effects to a previously configured composite virtual clip, Applicants’ method transitions from step 660 to step 1210 (FIG. 12). As those skilled in the art will appreciate, a “lensing” effect includes, for example and without limitation, overlay of one or more color filters, image distortions, and annotations.

Referring now to FIG. 12, in step 1210 the method selects a previously configured composite virtual clip, wherein that composite virtual clip is configured to include (N) previously saved virtual clips in an order from 1 to (N).

In step 1220, the method selects a lensing effect having a known storage location. In step 1230, the method configures an (i)th lensing effect link pointing to the known storage location for the desired lensing effect.

In step 1240, the method configures the (i)th lensing effect link to be simultaneously with activation of a link to an (i)th virtual clip. In step 1250, the method updates the composite virtual clip file to include the (i)th lensing effect link.

In step 1260, the method determines if the user desires to configure additional lensing effects for the selected composite virtual clip. If the user elects to configure additional transition effect links, then the method transition from step 1260 to step 1220 and continues as described herein. Alternatively, if the user does not elect to configure additional transition effect links, then the method transition from step 1260 to step 1270 and ends.

If a user desires in step 670 to add one or more sound effects to a previously configured composite virtual clip,

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Applicants method transitions from step 670 to step 1310 (FIG. 13). Referring now to FIG. 13, in step 1310 the method selects a previously configured composite virtual clip, wherein that composite virtual clip is configured to include (N) previously saved virtual clips in an order from 1 to (N).

In step 1320, the method selects a sound effect having a known storage location. In step 1330, the method configures an (i)th sound effect link pointing to the known storage location for the desired lensing effect.

In step 1340, the method configures the (i)th sound effect link to be simultaneously with activation of a link to an (i)th virtual clip. In step 1350, the method updates the composite virtual clip file to include the (i)th sound effect link.

In step 1360, the method determines if the user desires to configure additional sound effects for the selected composite virtual clip. If the user elects to configure additional sound effect links, then the method transition from step 1360 to step 1320 and continues as described herein. Alternatively, if the user does not elect to configure additional sound effect links, then the method transition from step 1360 to step 1370 and ends.

While the preferred embodiments of the present invention have been illustrated in detail, it should be apparent that modifications and adaptations to those embodiments may occur to one skilled in the art without departing from the scope of the present invention as set forth herein.

We claim:

1. A method to create and save an annotation associated with a Playable Media File, comprising:
 - receiving a Playable Media File;
 - creating an annotation relating to said Playable Media File;
 - providing said annotation to a network server;
 - providing a data profile to said network server, wherein said data profile comprises a location in said Playable Media File where said annotation should be made visible;
 - determining by said network server if said annotation is a first annotation submitted for said Playable media File;
 - if said annotation is not a first annotation submitted for said Playable Media File, encoding said data profile in a previously-created table of contents for said Playable Media File;
 - if said annotation is a first annotation submitted for said Playable Media File:
 - creating a table of contents by said network server for said Playable Media File; and
 - encoding by said network server said data profile in said table of contents;
 - wherein said Playable Media File is selected from the group consisting of an audio file, a video file, an audiovisual file, slide show, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, and MPEG file.
2. The method of claim 1, further comprising initiating a discussion thread within said Playable Media File at said location.
3. The method of claim 1, wherein:
 - said receiving further comprises receiving a Playable Media file by a first member of a social network;
 - said creating further comprises creating an annotation by said first member of said social network; and
 - said providing steps are performed by said first member of said social network.
4. The method of claim 3, wherein said initiating further comprises initiating by said first member a discussion thread within said Playable Media File at said location.

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5. The method of claim 1, further comprising storing said annotation as a file separate from said Playable Media File.

6. The method of claim 5, further comprising executing said Playable Media File by a second member of said social network.

7. The method of claim 6, wherein said first member differs from said second member.

8. The method of claim 6, wherein said first member and said second member are the same.

9. The method of claim 6, further comprising when said Playable Media File reaches said location, making said annotation visible.

10. The method of claim 9, further comprising:

displaying said executing Playable Media File in a first window; and

displaying said annotation in a second window.

11. The method of claim 9, further comprising displaying both said executing Playable Media File and said annotation in the same window.

12. An article of manufacture comprising a processor, a computer readable medium comprising computer readable program code disposed therein to create and save an annotation associated with a Playable Media File, the computer readable program code comprising a series of computer readable program steps to cause the processor to effect:

receiving a Playable Media File;

creating an annotation relating to said Playable Media File;

providing said annotation to a network server;

providing a data profile to said network server, wherein said data profile comprises a location in said Playable Media File where said annotation should be made visible;

determining by said network server if said annotation is a first annotation submitted for said Playable media File; if said annotation is not a first annotation submitted for said Playable Media File, encoding said data profile in a previously-created table of contents for said Playable Media File;

if said annotation is a first annotation submitted for said Playable Media File:

creating a table of contents by said network server for said Playable Media File; and

encoding by said network server said data profile in said table of contents;

wherein said Playable Media File is selected from the group consisting of an audio file, a video file, an audiovisual file, slide show, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, and MPEG file.

13. The article of manufacture 12, said computer readable program code further comprises a series of computer readable program steps to effect initiating a discussion thread within said Playable Media File at said location.

14. The article of manufacture 12, wherein:

the computer program readable step of receiving further comprises a computer program readable step of receiving a Playable Media file by a first member of a social network;

the computer program readable step of creating further comprises a computer program readable step of creating an annotation by said first member of said social network; and

the computer program readable step of providing steps are instructed by said first member of said social network to be effected by the processor.

15. The article of manufacture 14, wherein the computer program readable step of initiating further comprises a

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computer program readable step of initiating by said first member a discussion thread within said Playable Media File at said location.

16. The article of manufacture 12, said computer readable program code further comprises a series of computer readable program steps to effect storing said annotation as a file separate from said Playable Media File.

17. The article of manufacture 16, said computer readable program code further comprising a series of computer readable program steps to execute said Playable Media File by a second member of said social network.

18. The article of manufacture 17, wherein said first member differs from said second member.

19. The article of manufacture 17, wherein said first member and said second member are the same.

20. The article of manufacture 17, when said Playable Media File reaches said location, said computer readable program code further comprising a series of computer readable program steps of making said annotation visible.

21. The article of manufacture 20, said computer readable program code further comprising a series of computer readable program steps of:

displaying said executing Playable Media File in a first window; and

displaying said annotation in a second window.

22. The article of manufacture 20, said computer readable program code further comprising a series of computer readable program steps of displaying both said executing Playable Media File and said annotation in the same window.

23. A non-transitory computer usable medium encoded with a computer program product to create and save an annotation associated with a Playable Media File and usable with programmable computer processor disposed within a controller, comprising:

computer readable program code which causes said programmable computer processor to receive a Playable Media File;

computer readable program code which causes said programmable computer processor to create an annotation relating to said Playable Media File;

computer readable program code which causes said programmable computer processor to provide said annotation to a network server;

computer readable program code which causes said programmable computer processor to provide a data profile to said network server, wherein said data profile comprises a location in said Playable Media File where said annotation should be made visible;

computer readable program code which causes said programmable computer processor to determine by said network server if said annotation is a first annotation submitted for said Playable media File;

if said annotation is not a first annotation submitted for said Playable Media File, computer readable program code which causes said programmable computer processor to encode said data profile in a previously-created table of contents for said Playable Media File; if said annotation is a first annotation submitted for said Playable Media File:

computer readable program code which causes said programmable computer processor to create a table of contents by said network server for said Playable Media File; and

computer readable program code which causes said programmable computer processor to encode by said network server said data profile in said table of contents;

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wherein said Playable Media File is selected from the group consisting of an audio file, a video file, an audiovisual file, slide show, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, and MPEG file.

24. The computer program product of claim 23, further comprising computer readable program code which causes said programmable computer processor to initiate a discussion thread within said Playable Media File at said location.

25. The computer program product of claim 23, wherein: said receiving further comprises computer readable program code which causes said programmable computer processor to receive a Playable Media file by a first member of a social network; and

said creating further comprises computer readable program code which causes said programmable computer processor to create an annotation by said first member of said social network.

26. The computer program product of claim 25, wherein said initiating further comprises computer readable program code which causes said programmable computer processor to initiate by said first member a discussion thread within said Playable Media File at said location.

27. The computer program product of claim 23, further comprising computer readable program code which causes said programmable computer processor to store said annotation as a file separate from said Playable Media File.

28. The computer program product of claim 27, further comprising computer readable program code which causes

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said programmable computer processor to execute said Playable Media File by a second member of said social network.

29. The computer program product of claim 28, wherein said first member differs from said second member.

30. The computer program product of claim 28, wherein said first member and said second member are the same.

31. The computer program product of claim 28, further comprising computer readable program code which causes said programmable computer processor to make said annotation visible when said Playable Media File reaches said location.

32. The computer program product of claim 31, further comprising:

computer readable program code which causes said programmable computer processor to display said executing Playable Media File in a first window; and

computer readable program code which causes said programmable computer processor to display said annotation in a second window.

33. The computer program product of claim 31, further comprising computer readable program code which causes said programmable computer processor to display both said executing Playable Media File and said annotation in the same window.

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EXHIBIT 3



Kercsmar & O'Hara
A Litigation Boutique

INFRINGEMENT CLAIM CHART

Patent No. 9,451,001 and Facebook Clips, Facebook Gaming, Facebook Reels and Instagram Reels

Patent '001 Claim 1	Practiced by Facebook Clips¹	Practiced by Facebook Gaming²	Practiced by Facebook Reels³ and Instagram Reels⁴
1. A method to annotate Playable Media Files in a social network having a plurality of members, comprising:			
<ul style="list-style-type: none"> receiving by a member of said social network a Playable Media File; 	The Facebook Clip feature allows users to create clips from their own longer videos that have previously been posted on Facebook and/or live video feeds that that have been previously posted to Facebook.	The Facebook Gaming Clips feature allows users to create “short moments” from their longer video game streams, which are already on Facebook Gaming.	Both versions of Reels allow users to create Reels from previously created videos that have been uploaded to a social media website.
<ul style="list-style-type: none"> creating by said member of said social network an annotation 	The Facebook Clips feature allows users to	The Facebook Gaming Clips feature allows users to annotate videos that	Both versions of Reels allow users to annotate videos that have been previously

¹ This chart relies on the functionality for Clips that Facebook explains on its own website: <https://www.facebook.com/business/help/2967863099960249?id=1123223941353904>

² This chart relies on the functionality for Facebook Gaming Clips that Facebook explains on its own website: <https://www.facebook.com/business/help/566606050515360?id=648321075955172>

³ This chart relies on the functionality for Facebook Reels that Facebook explains on its own website: <https://www.facebook.com/business/help/5576190269101183>

⁴ This chart relies on the functionality for Instagram Reels that Instagram explains on its own website: <https://about.instagram.com/blog/announcements/introducing-instagram-reels-announcement>

relating to said Playable Media File;	select the video segment you wish to include in the shorter video clip using the slider below the video.	are already on the social media website.	uploaded to a social media website.
○ providing said annotation by said member of said social network to a network server;	The Facebook Clips feature allows users to annotate videos on Facebook's network.	The Facebook Gaming Clips feature allows users to annotate videos that are already on the social media website and publish the new video on the website.	Both versions of Reels allow users to post the annotated video to a social media website.
○ providing a data profile by said member of said social network to said network server, wherein said data profile comprises a location in said Playable Media File where said annotation should be embedded;	The Facebook Clips feature allows users to clip specific content and share that content. ('001 Patent, Specification 7:30 (discussing "data profiles").	The Facebook Gaming Clips feature allows users to annotate specific content and share that content. ('001 Patent, Specification 7:30 (discussing "data profiles").	Both versions of Reels allow users to select specific content from existing videos to include their new Reel.
○ embedding by said network server said annotation in the Playable Media File at said location; determining by said network server if said annotation is a first annotation submitted for said Playable media File;	The Facebook Clips feature creates a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)	The Facebook Gaming Clips feature creates a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)	Both versions of Reels create a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)

<ul style="list-style-type: none"> ○ if said annotation is not a first annotation submitted for said Playable Media File, encoding said data profile in a previously-created table of contents for said Playable Media File; if said annotation is a first annotation submitted for said Playable Media File: creating a table of contents by said network server for said Playable Media File; encoding by said network server said data profile in said table of contents; wherein said Playable Media File is selected from the group consisting of an audio file, a video file, an audiovisual file, slide show, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, MPEG file. 	<p>The Facebook Clips feature creates a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)</p>	<p>The Facebook Gaming Clips feature creates a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)</p>	<p>Both versions of Reels create a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)</p>
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EXHIBIT 4



Kercsmar & O'Hara
A Litigation Boutique

INFRINGEMENT CLAIM CHART

Patent No. 10,084,840 and Facebook Clips, Facebook Gaming,
Facebook Reels and Instagram Reels

Patent '840 Claim 1	Practiced by Facebook Clips¹	Practiced by Facebook Gaming²	Practiced by Facebook Reels³ and Instagram Reels⁴
1. A method to create and save an annotation associated with a Playable Media File, comprising:			
<ul style="list-style-type: none"> ○ receiving a Playable Media File; 	The Facebook Clip feature allows users to create clips from their own longer videos that have previously been posted on Facebook and/or live video feeds that have been previously posted to Facebook.	The Facebook Gaming Clips feature allows users to create “short moments” from their longer video game streams, which are already on Facebook Gaming.	Both versions of Reels allow users to create Reels from previously created videos that have been uploaded to a social media website.
<ul style="list-style-type: none"> ○ providing said annotation by said member of said social network to a network server; 	The Facebook Clips feature allows users to select the video segment you wish to include in the shorter video clip using the slider below the video.	The Facebook Gaming Clips feature allows users to annotate videos that are already on the social media website.	Both versions of Reels allow users to annotate videos that have been previously uploaded to a social media website.

¹ This chart relies on the functionality for Clips that Facebook explains on its own website: <https://www.facebook.com/business/help/2967863099960249?id=1123223941353904>

² This chart relies on the functionality for Facebook Gaming Clips that Facebook explains on its own website: <https://www.facebook.com/business/help/566606050515360?id=648321075955172>

³ This chart relies on the functionality for Facebook Reels that Facebook explains on its own website: <https://www.facebook.com/business/help/5576190269101183>

⁴ This chart relies on the functionality for Instagram Reels that Instagram explains on its own website: <https://about.instagram.com/blog/announcements/introducing-instagram-reels-announcement>

<ul style="list-style-type: none"> o providing said annotation to a network server; 	The Facebook Clips feature allows users to annotate videos on Facebook's network.	The Facebook Gaming Clips feature allows users to annotate videos that are already on the social media website and publish the new video on the website.	Both versions of Reels allow users to post the annotated video to a social media website.
<ul style="list-style-type: none"> o providing a data profile to said network server, wherein said data profile comprises a location in said Playable Media File where said annotation should be made visible; 	The Facebook Clips feature allows users to clip specific content and share that content. ('001 Patent, Specification 7:30 (discussing "data profiles").	The Facebook Gaming Clips feature allows users to annotate specific content and share that content. ('001 Patent, Specification 7:30 (discussing "data profiles").	Both versions of Reels allow users to select specific content from existing videos to include their new Reel.
<ul style="list-style-type: none"> o determining by said network server if said annotation is a first annotation submitted for said Playable media File; 	The Facebook Clips feature creates a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)	The Facebook Gaming Clips feature creates a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)	Both versions of Reels create a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)
<ul style="list-style-type: none"> o if said annotation is not a first annotation submitted for said Playable Media File, encoding said data profile in a previously-created table of contents for said Playable Media File; if said annotation is a first annotation submitted for said Playable Media File: creating a table of contents by said 	The Facebook Clips feature creates a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)	The Facebook Gaming Clips feature creates a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)	Both versions of Reels create a table of contents on the horizontal video timeline. ('001 Patent, Fig. 4 (discussing table of contents creation).)

network server for said Playable Media File; and encoding by said network server said data profile in said table of contents; wherein said Playable Media File is selected from the group consisting of an audio file, a video file, an audiovisual file, slide show, AVI file, MP3 file, MP4 file, WMA file, WAV file, Flash, and MPEG file.			
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